
ALSNews Vol. 191 January 23, 2002

Contents of This Issue:

1. BASIC ENERGY SCIENCES TO REVIEW ALS

(Contact: NVSmith@lbl.gov)

A review committee from the Department of Energy's Office of Basic Energy Sciences (DOE BES) will wind up its series of reviews of the four DOE synchrotron light sources by visiting the ALS on February 4-6, 2002. According to review committee chair Pedro Montano (DOE BES Division of Materials Sciences and Engineering), this is an important review that will "have teeth." A list of questions posed to the ALS by the review committee involves issues such as beamtime allocation, alternatives to participating research team (PRT) models, cost effectiveness, and future trends, plans, and potential problems. The agenda also includes updates on the current status of the ALS, scientific highlights, descriptions of industrial programs, overviews of future directions, and lunches with representatives of ALS advisory groups (UEC, SAC, PRTs). The highlight sessions will be open and will take place Monday and Tuesday, February 4-5, in Rm. 6-2202.

2. REMINDER: COMPENDIUM ABSTRACTS DUE JANUARY 28

(Contact: LSTamura@lbl.gov)

The deadline for submitting Compendium abstracts is next Monday, January 28, 2002. All users or user groups (including ALS staff members) should submit a one- to three-page abstract (including figures) describing each project conducted at the ALS during calendar year 2001, whether published, unpublished, or in progress. Submission information (including author guidelines, file specifications, and a submission form) can be found on the Web at http://alspubs.lbl.gov/Compendium_old. If you encounter problems uploading files via the Web, please don't hesitate to notify Lori Tamura as soon as possible (LSTamura@lbl.gov, 510-486-6172).

3. TIGHTER ACCESS PROCEDURES TO CONTINUE INDEFINITELY

(Contact: alsuser@lbl.gov)

According to Berkeley Lab Director Charles Shank, the DOE has determined that the national laboratories will operate at a somewhat heightened security status for the foreseeable future. For

ALS users, this means being diligent about planning ahead and following registration procedures (see http://www-als.lbl.gov/als/quickguide/registration.html). This will ensure that your name(s) will be added to the access list for the main (Blackberry Canyon) gate, where you should be prepared to show a photo ID upon arrival. Shuttle bus riders will be asked to show ID (e.g., Lab proximity card, Berkeley student ID, DOE badge) or demonstrate a business need to enter the Lab (e.g., a letter from the ALS, a badged employee as escort). Visitors arriving at the site who are not cleared by any of the above methods will remain in the gate area while the visitor's host is called. If the host cannot be reached, the Security Officer will then offer an escort to the visitor's destination. Further information about security procedures at Berkeley Lab can be found at http://www.lbl.gov/ehs/securityupdate/. If you have any questions about what to do, please contact the User Services Office at alsuser@lbl.gov or 510-486-7745.

4. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone
(Contact: rwf@physics.berkeley.edu)

As the new Chair of the Users' Executive Committee, I want to extend an invitation to all users to contact the members of the UEC with concerns or questions regarding the ALS Users' Group. I look forward to coordinating the efforts of the UEC in support of science at our facility.

As you may know, the UEC represents the over one thousand users of the ALS in a variety of venues, including discussions with ALS, Berkeley Lab, and DOE leadership.

The current membership of the UEC is as follows:

Harald Ade (North Carolina State University, harald_ade@ncsu.edu, 2000-02, Past Chair)
John Bozek (Advanced Light Source, Berkeley Lab, jdbozek@lbl.gov, 2002-04)
Jennifer Doudna (Yale University, doudna@csb.yale.edu, 2001-03)
Roger Falcone (University of California, Berkeley, rwf@physics.berkeley.edu, 1999-03, Chair)
Carolyn Larabell (Life Sciences Division, Berkeley Lab, calarabell@lbl.gov, 2000-02)
Dennis Lindle (University of Nevada, Las Vegas, lindle@nevada.edu, 2001-03)
Gerry McDermott (Physical Biosciences Division, Berkeley Lab, gmcdermott@lbl.gov, 2001-03)
Alexander Moewes (University of Saskatchewan, moewes@usask.ca, 2002-04)
Yasuji Muramatsu (Japan Atomic Energy Research Institute, murama@spring8.or.jp, 2002-04)
Cheuk-Yiu Ng (University of California, Davis, cyng@lbl.gov, 2000-02)
Eli Rotenberg (Advanced Light Source, Berkeley Lab, erotenberg@lbl.gov, 2002-04)
Sophie Canton (Western Michigan University, secanton@lbl.gov, 2002-04, Student Member)

I would like to thank outgoing Chair Harald Ade for his excellent leadership and successful efforts during 2001, both in Berkeley and with our sponsors in Washington. I'm very pleased that he will be continuing on the UEC.

To briefly introduce myself to you, I am on the Berkeley Physics faculty, and have done experiments at the ALS for about five years. For my research, I am interested in the dynamics of condensed-matter systems illuminated by intense, ultrashort-pulse lasers. I am part of a team

developing time-resolved x-ray scattering techniques, at both the ALS and other synchrotron facilities.

Please contact me with your ideas for the ALS.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Heino Nitsche (Forschungszentrum Rossendorf, Germany)
Felicia Betancourt (Berkeley Lab)
Ted Raab (Carnegie Institution of Washington)
Hoi-Ying Holman (Berkeley Lab)

Beamlines 5.0.1, 5.0.2, and 5.0.3
Sridhar Prasad, Yanming Zhang (Syrrx, Inc.)
Rashid Syed, Vivian Li (Amgen, Inc.)
Kunchithapadam Swaminathan (National Univ. of Singapore)
Stephanie Snyder, Luke Sherlin, Yihong Zhang (Univ. of California, San Francisco)
Tongpil Min, Ha Jeung Park, Bu Hyun Youn, Jackie Hilsenbeck (Washington State Univ.)

Beamline 7.0.1
Marjorie Olmstead (Univ. of Washington)

Beamline 7.3.1.1
Bruce Terris, Simone Anders (IBM Almaden Research Center)

Beamline 8.0.1
Yasuji Muramatsu (Japan Atomic Energy Research Institute)
Tomoyuki Yamamoto (Institute of Physical and Chemical Research, Japan)

Beamline 8.3.1
Seth Harris, Sabine Borgraeber, Mary Budny, Dan Minor, Hu Pan (Univ. of California, San Francisco)

Beamline 10.0.1
Ward Plummer (Univ. of Tennessee)
Nora Berrah (Western Michigan Univ.)
Dan Dessau (Univ. of Colorado at Boulder)

Beamline 10.3.2
Tatiana Kirpichtchikova (Univ. Joseph Fourier, France)
Richard Reeder (State Univ. of New York at Stony Brook)

6. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of December 12 - 17, 18 - 23, January 4 - 7, 8 - 13, and 14 - 20, the beam reliability (time delivered/time scheduled) was 98%. Of the scheduled beam, 86% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 192 February 6, 2002

Contents of This Issue:

1. MAGNETIC MATERIALS RESEARCH PROGRAMS UP FOR REVIEW

(Contact: NVSmith@lbl.gov)

At its November meeting, the ALS's Scientific Advisory Committee (SAC) called for a broad, cross-cutting review of magnetic materials research programs at the ALS. As a "board of directors," the SAC provides recommendations on all technical and policy issues that bear on the effective utilization of the ALS and on developments required to maintain scientific and technical productivity at the highest possible level. The review committee will be charged by the SAC to identify the elements of an optimum magnetic materials reasearch program at the ALS and to make specific recommendations for the best use of the elliptical polarization undulators (EPUs) now either in operation (at Beamline 4.0) or under construction (at Beamline 11.0) at the ALS. The review committee will be chaired by Sam Bader, senior physicist and group leader of the Magnetic Films Group in the Materials Science Division of Argonne National Laboratory. The review is tentatively scheduled for May 2002 and will take the form of a workshop-style meeting with the participation of both current and prospective ALS users involved in magnetic materials research. A similar SAC-requested cross-program review, which focused on microscopy research at the ALS, was held in February 1999.

2. DEADLINE FOR COMPENDIUM ABSTRACTS EXTENDED

(Contact: LSTamura@lbl.gov)

In response to requests for extra time and to ensure that as many users as possible are represented in our annual compendium of research, the deadline for abstract submission has been extended to February 11, 2002. All users or user groups (including ALS staff members) should submit a one- to three-page abstract (including figures) describing each project conducted at the ALS during calendar year 2001, whether published, unpublished, or in progress.

Submission information (including author guidelines, file specifications, and a submission form) can be found on the Web at http://alspubs.lbl.gov/Compendium_old. If you encounter problems uploading files via the Web, please don't hesitate to notify Lori Tamura as soon as possible (LSTamura@lbl.gov, 510-486-6172). We are currently in the process of indexing the abstracts and sending out acknowledgments; we ask for your patience as we work through the backlog of

files that were received by the deadline last week. Many thanks to all those who submitted their work in a timely manner.

3. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone
(Contact: rwf@physics.berkeley.edu)

The UEC held its first meeting, by teleconference, on January 30. We discussed issues that we wanted to bring up during our meeting with the DOE-BES Program Review Committee on February 4. Much of the discussion focused on "quality of life" issues, such as ideas for housing and transportation for users during beamtime, the positive impact of ALS support of beamline scientists and postdocs, and ideas for dealing with the increasing space crunch on the experiment floor of the ALS.

We also discussed holding a UEC meeting, with welcome participation by any users in town, sometime this spring at the ALS.

Jennifer Doudna of Yale University was announced as UEC vice chair.

Please contact me or other members of the UEC with your ideas for the ALS.

4. RECENT PUBLICATIONS

Drennan, C.L., J. Heo, M.D. Sintchak, E.R. Schreiter, and P.W. Ludden, "Life on carbon monoxide: X-ray structure of Rhodospirillum rubrum Ni-Fe-S carbon monoxide dehydrogenase," Proc. Natl. Acad. Sci. USA 98(21), 11973 (October 2001).

Foehlisch, A., O. Karis, M. Weinelt, J. Hasselstroem, A. Nilsson, and N. Martensson, "Auger resonant Raman scattering in itinerant electron systems: Continuum excitations in Cu," Phys. Rev. Lett. 88(2), 027601 (January 2002).

Hoang, C., and A.R. Ferre-D'Amare, "Cocrystal structure of a tRNA psi55 pseudouridine synthase: Nucleotide flipping by an RNA-modifying enzyme," Cell 107, 929 (December 2001).

Minko, S., M. Mueller, D. Usov, A. Scholl, C. Froeck, and M. Stamm, "Lateral versus perpendicular segregation in mixed polymer brushes," Phys. Rev. Lett. 88(3), 035502 (January 2002).

Ohldag, H., T.J. Regab, J. Stoehr, A. Scholl, F. Nolting, J. Luening, C. Stamm, S. Anders, and R.L. White, "Spectroscopic identification and direct imaging of interfacial magnetic spins," Phys. Rev. Lett. 87(24), 247201 (December 2001).

Schaefer, J.H., E. Rotenberg, S.D. Kevan, P. Blaha, R. Claessen, and R.E. Thorne, "High-temperature symmetry breaking in the electronic band structure of the quasi-one-dimensional solid NbSe3," Phys. Rev. Lett. 87(19), 196403 (November 2001).

Sui, H., B. Han, J. Lee, P. Wallen, and B. Jap, "Structural basis of water-specific transport through the AQP1 water channel," Nature 414, 872 (December 2001).

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS (which will be operating in two-bunch mode from February 13-25).

Beamline 1.4.3
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Stephen Cramer (Univ. of California, Davis)
Reinhard Doerner (Univ. of Frankfurt, Germany)

Beamlines 5.0.1 and 5.0.2
Xiaoling Xie, Yunyi Wei (Vertex Pharmaceuticals Inc.)
Julian Chen (Univ. of California, San Francisco)
Li Fan, Timothy Wood (The Scripps Research Institute)
Wa Yu, Kaoru Yoshida (Univ. of California, Berkeley)

Beamline 6.3.1
Dennis Lindle (Univ. of Nevada, Las Vegas)

Beamline 7.3.1.1
Boris Sinkovic (Univ. of Connecticut)
Simone Anders (IBM Almaden Research Center)

Beamline 7.3.3
Ersan Ustundag (California Institute of Technology)

Beamline 9.3.2
Mike Prior (Berkeley Lab)

Beamline 10.0.1
Yoshiro Azuma (Photon Factory, KEK, Japan)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user run of January 24 - 28, the beam reliability (time delivered/time scheduled) was 93%. Of the scheduled beam, 69% was delivered to completion without interruption. There were some interruptions due to water-flow trips and superbend intermittent over-temperature trips.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift

should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 193 February 20, 2002

Contents of This Issue:

1. UNPRECEDENTED AEROSOL LEVELS FOUND AT WORLD TRADE CENTER

(Contact: tacahill@ucdavis.edu)

World Trade Center air samples collected last fall and analyzed in part at the ALS show extremely high spikes in the levels of very fine aerosols--particles between 0.09 and 0.25 micrometers in diameter that can remain suspended in air for long periods of time. According to Tom Cahill (Univ. of California, Davis), the levels of these tiny particulates exceeded those found on the worst air days in Beijing, downwind from coal-fired power plants, and from the Kuwaiti oil fires during the Gulf War. Cahill leads the DELTA Group (Detection and Evaluation of Long-Range Transport of Aerosols), a collaboration of aerosol scientists that has made detailed studies of aerosols from volcanic eruptions and global dust storms as well as from the 1991 Gulf War oil fires. The group's preliminary findings were reported last week for air samples taken October 2-31, 2001, about a mile north of ground zero. See http://delta.ucdavis.edu/WTC.htm for a sample of the data.

According to the study, the aerosols were found to contain high levels of sulfur and silicon and relatively high levels of iron, titanium, vanadium, nickel, copper, and zinc--all by-products of the crucible of construction materials, office paraphernalia, and fuel oil that smoldered for weeks at the disaster site. Fortunately, only low levels of the toxic metals lead and mercury were detected in the very fine particles, and relatively few asbestos fibers were found in the samples.

A suite of analytical techniques, including x-ray fluorescence at Beamline 10.3.1, combined with state-of-the-art collection technology gives the DELTA team the unequaled ability to comprehensively measure a wide range of particle sizes and compositions and their minute-by-minute fluctuations for periods of up to four weeks. In contrast, traditional techniques used by the Environmental Protection Agency (EPA) provide only averaged measurements that tend to smooth out the peaks of the smallest (and possibly most hazardous) particles, which can penetrate the lungs and enter the bloodstream. The health consequences of breathing such high concentrations of very fine particulates are uncertain. An EPA standard establishes a 24-hour peak of 65 micrograms per cubic meter for particles 2.5 micrometers or less, but it is based on health studies of air samples where very fine particles (less than 0.25 micrometers) are only a small fraction of the total particulate mass. At one point, the DELTA team found a spike of 58 micrograms per cubic meter of very fine particles in a 45-minute period. The levels eventually dropped off toward the end of October.

Although the potential hazard in the air over New York City seems to have settled by now, Cahill warned that there is still the possibility that indoor cleanup efforts could resuspend very fine particles. His group has chosen to announce their preliminary results (the work has not yet been published or peer reviewed) at this time so that those in the affected area can take the proper precautions to protect their health. For more information, see http://delta.ucdavis.edu/news.htm.

2. MOLECULAR FOUNDRY INFORMATION NOW ONLINE

(Contact: MDAlper@lbl.gov)

Web pages devoted to the upcoming Berkeley Lab Molecular Foundry Workshop, to be held at the Lab April 4-5, 2002, are now online at http://foundry.lbl.gov/. The site includes a tentative workshop agenda, an online registration form, as well as housing and transportation information. Workshop attendees will have the opportunity to hear talks by leaders in this relatively new and important field and to provide input on how the Foundry's facilities can be designed and operated to be of greatest value to prospective users. The registration fee is $100.00 (regular) and $75.00 (student). The registration deadline is Friday, March 29; after that date, late registration will be accepted on an "as available" basis for $125.00 (regular) and $100.00 (student). Blocks of rooms at nearby hotels have been reserved and will be held until Tuesday, March 5.

3. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next three weeks at the ALS (which will continue operating in two-bunch mode until February 25).

Beamline 1.4.3
T.J. Wilkinson (Berkeley Lab)
Kelly Knutsen (Univ. of California, Berkeley)
Upal Ghosh (Stanford Univ.)
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Reinhard Doerner (Univ. of Frankfurt, Germany)
Dan Waddill (Univ. of Missouri-Rolla)
Boris Sinkovic (Univ. of Connecticut)
Jo Stohr (Stanford Synchrotron Radiation Laboratory)

Beamline 6.3.1
Dennis Lindle (Univ. of Nevada, Las Vegas)

Beamline 7.0.1
Steve Kevan (Univ. of Oregon)
Jim Tobin (Lawrence Livermore National Laboratory)
Brian Tonner (Univ. of Central Florida)
Z.Q. Qiu (Univ. of California, Berkeley)

Beamline 8.0.1
Richard Saykally (Univ. of California, Berkeley)
Manfred Neumann (Univ. of Osnabrueck, Germany)

Beamline 9.3.2
Hendrik Bluhm (Fritz-Haber-Institute, Germany)
Reinhard Denecke (Max-lab, Lund Univ., Sweden)

Beamline 10.0.1
Yoshiro Azuma (Photon Factory, KEK, Japan)
Atsushi Fujimori (Univ. of Tokyo, Japan)
Ron Phaneuf (Univ. of Nevada, Reno)

Beamline 10.3.1
Tom Cahill, Steve Cliff, and colleagues (Univ. of California, Davis/DELTA Team)

Beamline 10.3.2
Frederic Panfili (French National Center for Scientific Research)

4. NEXT ALSNEWS: MARCH 13

Travel plans for ALS editorial staff members dictate that the next issue of ALSNews will be published in three weeks rather than two, on March 13, 2002.

5. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of January 29 - February 3, February 5 - 10, and February 13 - 17 (two-bunch mode), the beam reliability (time delivered/time scheduled) was 95.9%. Of the scheduled beam, 90.1% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 194 March 13, 2002

Contents of This Issue:

1. AUSTRALIAN GOVERNOR AND LIGHT SOURCE ADVISORS VISIT

(Contacts: NVSmith@lbl.gov, AJackson@lbl.gov)

John Landy, Governor of the State of Victoria, Australia, recently visited the ALS to get an overview of ongoing research and development projects here. The Victorian government is planning to build its own synchrotron, the Australian Synchrotron Light Source (ASLS), at Monash University in Melbourne. This area is home to a wealth of Australia's foremost manufacturing, materials, and high-tech companies as well as five key divisions of Australia's preeminent research vehicle, the Commonwealth Scientific & Industrial Research Organisation. The region also houses the highly acclaimed Monash medical precinct, which has a close collaborative link to the Parkville biotechnology precinct at Melbourne University, a major player in biomedical research.

Governor Landy was accompanied by Jane Niall and Andrea Huggins of the Victorian Department of State and Regional Development, secretary Charles Curwen, and biotechnology advisor Stan Yakatan. The entourage was welcomed by ALS Scientific Director Neville Smith and given a history of ALS construction and development by Alan Jackson of the Accelerator and Fusion Research Division (AFRD). The visitors then toured the experiment floor and listened to presentations about environmental science from Alain Manceau of the ALS and about protein crystallography from Thomas Earnest of the Physical Biosciences Division.

In addition, a small number of accelerator experts from the US, Europe, and Australia met at Berkeley Lab last month for the first meeting of the ASLS International Machine Advisory Committee (IMAC), chaired by Alan Jackson. The other committee members were Jeff Corbett (SSRL), Dieter Einfeld (ANKA, Germany), Dieter Kraemer (BESSY, Germany), Stephen Milton (APS), and Annick Ropert (ESRF, France). The ASLS was represented by Acting Project Director Max Roger, Acting Technical Director John Boldemen, and Technical Consultant Erhard Huttle. The two-and-a-half-day meeting began with a welcome by AFRD Division Director William Barletta, followed by technical discussions that ranged over design choices for the full gamut of accelerator systems. The group was given a tour of the ALS accelerators by David Robin, ALS Accelerator Physics Group Leader. The advisory committee will convene again in Melbourne in late June.

2. JAMES W. ALLEN TO RECEIVE APS ISAKSON PRIZE

ALS user James W. Allen, who is working at the ALS on a one-year sabbatical from the University of Michigan, has been named a co-recipient of the 2002 Frank Isakson Prize by the American Physical Society (APS). The prize recognizes Jim "for his outstanding contributions to the field of spectroscopy in strongly corrrelated electron systems leading to elucidation of many-body physics." The Isakson prize was established in 1979 to recognize and encourage outstanding contributions to the field of optical effects in solids. While this award generally goes to an optical spectroscopist, this is the first time for it to be awarded to a scientist who primarily uses soft x-rays to perform electron spectroscopy. The other recipient this year, Thomas Timusk (McMaster Univ.), is an infrared spectroscopist.

According to the biography on the APS Web site (http://www.aps.org/praw/isakson/02allen.html), Jim and his collaborators have employed resonant and inverse photoemission and x-ray and optical spectroscopies to study the electronic structure of solids, especially aspects intrinsic to strong electron correlations (mixed valence, the Kondo resonance, and Mott-Hubbard and non-Fermi-liquid physics) in rare-earth, transition-metal, and actinide materials. Their most recent focus is on the use of angle-resolved and resonant photoemission spectroscopy to elucidate quasiparticle phenomena and to identify generalized signatures of electron fractionalization in various strongly correlated and low-dimensional materials. The Isakson prize, which has the flavor of a lifetime achievement award, covers not only recent ALS research but also current and past research at other synchrotrons, as well as early work using optical spectroscopy. Nevertheless, the ALS is particularly delighted to host such a distinguished researcher during his year of recognition through such a prestigious award. Congratulations, Jim!

3. APPLY NOW FOR 2002-2003 DOCTORAL FELLOWSHIPS

(Contact: KGreen@lbl.gov)

The ALS is again offering several doctoral fellowships in residence for the 2002-2003 academic year. Through these fellowships, qualified graduate students will gain hands-on experience using synchrotron radiation by performing a major part of their thesis work at the ALS. Applicants must be full-time Ph.D. students pursuing synchrotron-radiation-based research in the physical or biological sciences and have passed all qualifying or comprehensive verbal and written examinations (generally third-year students). The deadline for applying is May 1, 2002.

The fellowships include a one-year appointment (with the possibility of renewal) and a $15,000 annual stipend. Fellows will be matched with an on-site mentor (generally a beamline scientist) and have access to ALS resources, including beamtime. Fellows are expected to present their results at a meeting or as a seminar at the end of the fellowship year. More detailed information, along with links to frequently asked questions and the application form, can be found at http://www-als.lbl.gov/als/fellowships/index.html.

4. PLANS FOR APRIL SHUTDOWN SET

(Contact: JPHarkins@lbl.gov)

The ALS will shut down for approximately one month, from April 3 to May 8, for maintenance and installation activities. While it has not received the attention of the superbend shutdown last August, this shutdown is going to be just as busy, with many major activities scheduled.

Installation of the insertion device for the Molecular Environmental Sciences beamline under construction in Sector 11 will be a primary task. This will involve replacement of the vacuum chamber, installation of three newly designed chicane magnets, and installation of a new elliptically polarizing undulator.

Another major activity will be the survey and alignment of the storage ring. This will involve disconnecting many of the bellows and flex bands (the flexible connections between major storage ring components) to avoid damaging these components. The front ends will also be surveyed and, with this data in hand, a plan will be developed for any needed front-end and beamline alignment. Terry Byrne of the Accelerator Physics Group is working with the beamline scientists to coordinate this effort with the engineering staff. Two days of beamline alignment with beam have been scheduled during the start-up period in early May.

Higher-order mode dampers will be installed in the storage ring rf cavities to improve the reliability of this system. While the installation will be relatively simple, the commissioning of this system can be very tricky. High-power testing is now being performed on these dampers to reduce the probability of problems during commissioning of these dampers in the storage ring.

The shutdown will also include activities such as relocation of electronic racks in Sectors 1 and 3, moving the modular clean room and installation of a platform in Sector 12, and replacement of the chicane magnets in Sector 4.

If you have any questions regarding the shutdown activities, please contact Joe Harkins at 510-486-7486.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Felicia Betancourt (Berkeley Lab)
Kelly Knutsen (Univ. of California, Berkeley)
T.J. Wilkinson (Berkeley Lab)

Beamline 4.0.2
Chuck Fadley (Univ. of California, Davis)
Dan Waddill (Univ. of Missouri-Rolla)
Boris Sinkovic (Univ. of Connecticut)

Beamlines 5.0.1, 5.0.2, and 5.0.3
Ed Berry, David Cobessi (Berkeley Lab)
Brigitte Schobert, Janos Lanyi (Univ. of California, Irvine)

Stewart Turley, Paulene Quigley Sheldon, Dan Mitchell, Claire O'Neal, George Waisedchaisri (Univ. of Washington)
Cliff Mol, Dave Hosfield (Syrrx, Inc.)
Evette Radisky, Seok-Yong Lee, Seth Rubin, Annie Roberts (Univ. of California, Berkeley)

Beamline 6.3.1
Krystyna Jablonska (Polish Academy of Sciences)
Yasuji Muramatsu (Japan Atomic Energy Research Institute)

Beamline 7.0.1
Steve Kevan (Univ. of Oregon)
Gary Mitchell (The Dow Chemical Company)
Dan Dessau (Univ. of Colorado at Boulder)
Adam Hitchcock (McMaster Univ., Canada)
Karsten Horn (Fritz-Haber-Institute, Germany)

Beamline 7.3.1.1
Andrew Smith (Daresbury Laboratory, UK)
Simone Anders (IBM Almaden Research Center)

Beamline 8.0.1
Eberhard Umbach (Univ. of Wuerzburg, Germany)

Beamline 9.3.2
Glenn Waychunas (Berkeley Lab)
Frank Ogletree (Berkeley Lab)

Beamline 10.0.1
Dan Dessau (Univ. of Colorado at Boulder)
Joseph Nordgren (Uppsala Univ., Sweden)
Duane Jaecks (Univ. of Nebraska-Lincoln)

Beamline 10.3.1
Peter Weber (Univ. of California, Berkeley)

Beamline 10.3.2
Alain Manceau (Univ. of California, Berkeley)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the recent runs in two-bunch mode (February 13 - 17 and 20 - 25), the beam reliability (time delivered/time scheduled) was 91%. Of the scheduled two-bunch beam, 84% was delivered to completion without interruption. For the normal user runs of February 26 - March 3 and March 5 - 10, the beam reliability was 83%. Of the scheduled beam, 78% was delivered to completion without interruption. On March 7 there was a major power outage affecting the entire UC Berkeley campus that disrupted beam delivery for almost one day.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov, ejmoxon@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 195 March 27, 2002

Contents of This Issue:

1. LIGHT-SOURCE LEADERS NETWORK AT ALS

(Contacts: GFKrebs@lbl.gov, ZHussain@lbl.gov)

ALS Director Daniel Chemla hosted coordination meetings this month with his counterparts from the three other Department of Energy synchrotron light sources in the US. On Wednesday, March 13, Daniel met with J. Murray Gibson, Associate Laboratory Director for the Advanced Photon Source (APS), and Steven Dierker, Chairman of the National Synchrotron Light Source (NSLS). The meeting provided an excellent opportunity to discuss how the various facilities can work together to ensure that the needs of the synchtroton community are met effectively and efficiently.

Discussion was prompted by a series of talks on subjects of interest. Howard Padmore (Experimental Systems Group) gave a presentation on a national initiative for synchrotron detector research and development. Erik Anderson (Center for X-Ray Optics) described the Nanowriter, an ultra-high-resolution electron-beam lithography machine. Thomas Earnest (Berkeley Center for Structural Biology) spoke about protein crystallography, and Robert Schoenlein (Materials Sciences Division) addressed the topic of femtosecond science. Neville Smith (ALS Division Deputy for Science) and Zahid Hussain (Scientific Support Group) took the guests on a tour of the ALS experiment floor.

The group lunched with Berkeley Lab Director Charles Shank, and dinner was also attended by Keith Hodgson, Director of the Stanford Synchtrotron Radiation Laboratory (SSRL). Although Hodgson was unfortunately unable to attend Wednesday's sessions, he was present on Friday, March 15, for an ALS/SSRL Coordination Meeting at the ALS. These annual meetings between the managers of the ALS and SSRL are intended to foster a strong, cooperative relationship between the two West-Coast facilities. Last year's meeting was held at SSRL. Agenda items for this meeting included conference coordination, timing of shutdowns, collaboration on users' meetings and workshops, funding strategies, research and development projects with potential for cooperation, and software compatibility.

2. COMING SOON TO THE ALS: "THE HULK"

Cast and crew members for an upcoming movie based on the Marvel Comics character, The Incredible Hulk, will be filming at the ALS and other Bay Area locations next month. The role

of scientist Bruce Banner will be played by Eric Bana ("Black Hawk Down"). Other cast members include Academy Award winner Jennifer Connelly ("A Beautiful Mind"), Sam Elliott, and Nick Nolte. The Hulk himself will be a special-effects creation of the Industrial Light and Magic division of Lucasfilm, Ltd. Ang Lee, whose "Crouching Tiger, Hidden Dragon" won the 2001 Academy Award for best foreign language film, will direct. Lee, who had visited Berkeley Lab earlier to scout for locations, was said to be fascinated by the intricacies of the ALS interior and the Lab's breathtaking views of the Bay Area.

The filming will primarily take place over a weekend during the ALS's April shutdown, and normal off-hours employee access to the Lab may be restricted for the duration of that weekend. The agreement with Universal Studios states that there will be no alteration of facilites or the environment and that no research will be disrupted. Berkeley Lab will be reimbursed for all costs incurred in the management and control of the project. The finished product is scheduled for release during the summer of 2003.

3. ALS AWARDS AND HONORS

The ALS is pleased to acknowledge those in its orbit whose achievements have been recognized through awards and honors. Congratulations on a job well done!

Christoph Bostedt, graduate-student member of the Beamline 8.0.1 participating research team, received a Materials Research Society (MRS) Silver Award at the society's Fall 2001 meeting. The MRS Graduate Student Awards are highly competitive and are intended to honor and encourage graduate students whose academic achievements and current materials research show a high order of excellence and distinction. Finalists for the awards participate in a special student-presentation judging session at one of the society's meetings. Criteria for selection include thoroughness of the work; originality and independence of the contribution; depth of understanding of the topic, methodologies, and context; and finally, promise for future achievement. Christoph is affiliated with the University of Hamburg, Germany, and Lawrence Livermore National Laboratory (LLNL). The work described in his winning paper, "Surface Passivation Effects of Deposited Ge-Nanocrystal Films Probed with Synchrotron Radiation," was also the subject of his award-winning student poster at the 2001 ALS Users' Meeting.

The 2000 ALS Activity Report received the highest-level "Distinguished" award in the Northern California Technical Communication Competition sponsored by the Society for Technical Communication (STC). The STC is a worldwide organization dedicated to advancing the arts and sciences of technical communication. It sponsors several annual competitions to recognize distinguished work and to hold up quality standards against which the best work should be measured. Of the four award levels (Achievement, Merit, Excellence, and Distinguished), Distinguished is the highest, exemplifying outstanding technical communication that not only "hits all the marks," but also introduces an innovative approach or a positive surprise. The production team for the 2000 ALS Activity Report was led by Annette Greiner, member of the ALS Technical Information Section and Berkeley Lab's Technical and Electronic Information Department (TEID). Team members included Art Robinson (ALS); Liz Moxon, Lori Tamura, and Greg Vierra (ALS/TEID); Alice Ramirez, Denise Allen, Flavio Robles, Cheryl Ventimiglia, Robert Couto, and Faye Jobes (TEID). Also recognized with an "Excellence" award was the

ICESS8 conference web site (http://www-als.lbl.gov/icess/), produced by Annette Greiner, Greg Vierra, Kim Hallock (LLNL), and Chuck Fadley (Univ. of California, Davis).

4. REGISTER NOW FOR MOLECULAR FOUNDRY WORKSHOP
(Contact: MDAlper@lbl.gov)

A workshop to plan for Berkeley Lab's Molecular Foundry will be held at the Lab on April 4-5, 2002. The Molecular Foundry will be a multidisciplinary user facility for nanoscience researchers from academia, industry, and government. The registration deadline is this Friday, March 29; after that date, late registrations will be accepted on an "as available" basis and subject to late registration fees. Don't miss the opportunity to learn about this exciting new development and to contribute your ideas during this critical planning stage. To register, go to the workshop Web site at foundry.lbl.gov.

5. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of March 14 - 18 and 19 - 24, the beam reliability (time delivered/time scheduled) was 98%. Of the scheduled beam, 89% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

ALSNews Vol. 196 April 10, 2002

Contents of This Issue:

1. MOLECULAR FOUNDRY WORKSHOP DRAWS OVERFLOW CROWD

by Art Robinson
(Contact: MDAlper@lbl.gov)

Nanoscale science and technology is now one of the nation's top research priorities, so it is no surprise that an overflow crowd of more than 350 registrants for a two-day workshop at Berkeley Lab filled two auditoriums to hear about and contribute ideas for the new Molecular Foundry, which is scheduled to open for business in early 2006. (Photos taken at the workshop will soon be posted online at http://foundry.lbl.gov.) The Molecular Foundry is one of three Nanoscale Science Research Centers already selected to be established at Department of Energy (DOE) national laboratories with funding by DOE's Office of Basic Energy Sciences. Two additional centers are in the proposal stage.

The workshop began with a welcome by Berkeley Lab Director Charles Shank and background talks by Patricia Dehmer, DOE Associate Director of Science for Basic Energy Sciences, and Daniel Chemla, who has twin duties as ALS Director and Director of Berkeley Lab's Materials Sciences Division (MSD will be the home of the Molecular Foundry). After three plenary lectures by experts exploring selected applications of nanoscale technology, attendees heard a series of rather detailed presentations about the Foundry, which will be headed by Paul Alivisatos of MSD and the University of California, Berkeley (UCB), Department of Chemistry.

As described by Alivisatos, the Molecular Foundry will be organized around six core facilities, each directed by a senior scientist: Inorganic Nanomaterials (Alivisatos); Organic, Polymer/Biopolymer Synthesis (Jean Frechet, MSD and UCB Department of Chemistry); Theory (Steve Louie, MSD and UCB Department of Physics); Nanofabrication (Jeff Bokor, MSD and UCB Department of Electrical Engineering and Computer Science); Biological Nanostructures (Carolyn Bertozzi, MSD and UCB Departments of Chemistry and Molecular and Cell Biology); and Imaging and Manipulation (Miquel Salmeron, MSD).

Each facility will be supported by a mixture of staff scientists, technicians, postdoctoral associates, students, and administrative personnel. To be operated as a national facility, the Molecular Foundry will welcome short- and long-term visitors (with various degrees of experience) as well as collaborators. Those submitting successful proposals will come to a six-level building to be sited between the National Center for Electron Microscopy (NCEM) and Building 66 (Center for Advanced Materials and MSD Division Offices). Synergy and cross-

fertilization between facilities will be emphasized. In addition, core staff will maintain active research programs of their own to ensure they remain at the forefronts of their fields.

Reflecting a highly enthusiastic response to plans for the Molecular Foundry, Alivisatos reported at the workshop conclusion that the single-most-asked question was "Why aren't you starting sooner?" Dehmer noted that the same question arose at workshops held for the other nanoscience centers and affirmed DOE's commitment to work with facility directors to move as quickly as possible.

2. FIRST CALL: GENERAL SCIENCES PROPOSALS DUE JUNE 1

(Contact: alsproposals@lbl.gov)

The User Services Office is now accepting proposals from scientists who wish to conduct research as independent investigators in the general sciences during the running period from December 2002 to May 2003. The deadline for submissions is June 1, 2002. (This information does not apply to protein crystallography proposals, which have a separate process and schedule.) Scientists wishing to renew a previous proposal must fill in a one-page Experiment Report/Beamtime Request and submit it to the User Services Office by the June 1 deadline. The numeric rating for each proposal will be communicated to the investigator along with comments from the Proposal Study Panel, where appropriate. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

ALS User Services Administrator
alsuser@lbl.gov

Independent investigator process
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

3. ALS AWARDS AND HONORS

The ALS is pleased to acknowledge those in its orbit whose achievements have been recognized through awards and honors. Congratulations on a job well done!

Keith Jackson (Berkeley Lab Materials Sciences Division), leader of the lithography programs at the Center for X-Ray Optics (Beamlines 3.3.1 and 3.3.2 at the ALS), has been named the new president of the National Society of Black Physicists, the country's largest organization devoted to the African-American physics community (http://nsbp.org). Jackson is an expert in the deep-etch lithography technique known as LIGA, which uses a light beam to sculpt out material

several hundred microns below the surface, allowing for the fashioning of truly three-dimensional micromachines. Jackson holds undergraduate degrees in both physics and electrical engineering and a Ph.D. in physics from Stanford University. He joined Berkeley Lab in 1992. The National Society for Black Physicists was established in 1977 at Morgan State University in Baltimore, Maryland. Jackson succeeded Charles McGruder of Western Kentucky University as head of the Society starting on March 13.

4. REMINDER: DEADLINE APPROACHING FOR FELLOWSHIP APPLICATIONS
(Contact: KGreen@lbl.gov)

The application deadline for 2002-2003 ALS doctoral fellowships is May 1, 2002. The fellowships are awarded to qualified (generally third-year) Ph.D. students pursuing synchrotron-radiation-based research. Recipients will perform a major part of their thesis work at the ALS and will be matched with an on-site mentor. More detailed information, along with links to frequently asked questions and the application form, can be found at http://www-als.lbl.gov/als/fellowships/index.html.

5. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user run of March 26 - April 3, the beam reliability (time delivered/time scheduled) was 97%. Of the scheduled beam, 85% was delivered to completion without interruption. There were no significant outages. The ALS is currently in a planned shutdown for installations and maintenance. User operations are scheduled to resume at 12:00 a.m. on Thursday, May 9, 2002.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863

Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 197 April 24, 2002

Contents of This Issue:

1. ULTRAFAST SCIENCE CULTIVATED IN NAPA WORKSHOP

(Contact: HAPadmore@lbl.gov)

Connoisseurs of the ultrafast gathered last week (April 14-17) in Napa, California, to explore "New Opportunities in Ultrafast Science Using X Rays." The development of ultrafast optical laser systems has revolutionized the study of many problems in the biological, chemical, and physical sciences. The advent of ultrafast x-ray sources offers the possibility for extending optical studies to include x-ray techniques such as x-ray absorption spectroscopy (to give local chemical and magnetic information) and x-ray diffraction (to give structural information), with resolutions of well below 100 femtoseconds.

In light of this, the Napa workshop brought together members of the existing ultrafast optical community and the emerging ultrafast x-ray community to define scientific highlights and directions for the use of the x-ray techniques, to promote cross-fertilization of ideas between the two communities, and to define the source characteristics required for particular classes of experiment. The four-day workshop featured morning sessions that began at 8:30 a.m. and evening sessions that ended at 10:00 p.m., interspersed with afternoon poster sessions and, naturally, a number of wine and cheese receptions. Topics of discussion included structural dynamics, magnetism, chemical dynamics, electron dynamics, biology, and high-energy-density dynamics.

The workshop was organized with funds from the ALS, Stanford Synchrotron Radiation Laboratory, the Swiss Light Source, the Office of Basic Energy Sciences of the U.S. Department of Energy (DOE), and the National Institutes of Health through BioCARS (the biological sector of the Consortium for Advanced Radiation Sources, managed by the University of Chicago). The gathering was attended by over 100 experts from many different countries, including Canada, France, Germany, Italy, Sweden, Switzerland, and the UK. Among the luminaries in attendance were Massimo Altarelli, Director of the ELETTRA synchrotron in Trieste, Italy, and Denis Raoux, Project Director for the Soleil synchrotron being built near Paris. Both directors scheduled time before or after the workshop to spend a day touring the ALS and kept ALS management and staff busy discussing topics such as the science being done at the ALS, next-generation detectors, and facility developments.

2. SYNCHROTRON SUMMER SCHOOL EXPANDS CURRICULUM

(Contacts: nilsson@ssrl.slac.stanford.edu, attwood@eecs.berkeley.edu)

Building upon last year's successful program (held at Berkeley's Clark Kerr campus), this year's joint Stanford-Berkeley Synchrotron Summer School, to be held July 7-13, 2002, will be hosted by Stanford and will offer participants a choice between a physical science course and a life science course. Joint lectures, evening discussions, and visits to synchrotron light sources will provide an interdisciplinary and intellectually stimulating training ground for new and experienced researchers alike. Students, postdocs, and independent scientists who have ongoing research projects are encouraged to participate.

The physical sciences course will cover the fundamentals of synchrotron radiation, including the use of spectroscopy and diffraction in physics, chemistry, and materials science. The life sciences course, in addition to introducing the fundamentals of synchrotron radiation, will provide intensive training in x-ray diffraction, data collection, and crystal structure determination. More detailed information and applications for the week-long residential program are available online at http://smb.slac.stanford.edu/SR-School/. The program is limited to approximately 40 students per course, and prospective applicants are encouraged to apply early (by May 10). Applicants will be informed in writing regarding their application status by May 31.

The summer school is sponsored jointly by Stanford University, the University of California, Berkeley, Lawrence Berkeley National Laboratory, and the Stanford Synchrotron Radiation Laboratory, with additional funding support from the U.S. Department of Energy, the National Institutes of Health, and corporate sponsors. David Attwood (attwood@eecs.berkeley.edu) and Anders Nilsson (nilsson@ssrl.slac.stanford.edu) are the directors for the physical science course, and Peter Kuhn (pkuhn@stanford.edu) and John Kuriyan (kuriyan@uclink.berkeley.edu) are the directors for the life science course.

3. MOLECULAR FOUNDRY PHOTOS AND PRESENTATIONS

Photos and presentation slides from the Molecular Foundry workshop held at Berkeley Lab earlier this month are now posted at the Molecular Foundry Web site, http://foundry.lbl.gov/.

4. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone

(Contact: rwf@physics.berkeley.edu)

On April 17, eight representatives from the UECs of the four DOE synchrotron facilities (H. Ade and J. Doudna represented the ALS) visited Washington, DC, to meet with staffers from the House and Senate Energy and Water Appropriations Subcommittees, the Office of Management and Budget, and the Office of Science and Technology. A briefing document discussing the science, funding, and user profiles of the four facilities was presented and discussed. These annual visits have become an important means of showing our enthusiasm for what we are doing, of communicating our substantial contributions to basic and applied science, the

economy, health, and security, and of articulating our needs. The briefing package will soon be made accessible to all users for their own efforts in communicating with Congress.

5. ALS GOES HOLLYWOOD: "HULK" FILMING GOES SMOOTHLY

(Contact: JPHarkins@lbl.gov)

A film crew from Universal Studios descended upon the ALS last Friday evening, April 19, and worked almost nonstop through the weekend until early Tuesday morning to complete the Berkeley Lab location shots for the upcoming movie, "The Hulk." Eric Bana, Sam Elliott, Jennifer Connelly, Lou Ferrigno, and Nick Nolte were at the ALS at various times throughout the filming. Eric Bana's excellent physical conditioning was apparent as he rode a bike up and down the hill along Lawrence Road just below the ALS in seemingly endless retakes requested by director Ang Lee. The filming finished at almost midnight on Monday with a dramatic police car scene in the Building 80 parking lot. While parking was severely affected during the day on Monday, Berkeley Lab employees took the inconvenience in stride. The Universal Studios personnel were great to work with. Look for the film to come out during the summer of 2003.

6. CORRECTION

In the last issue of ALSNews, Keith Jackson was incorrectly identified as being affiliated with Beamline 3.3.1 (commercial LIGA). He is affiliated with the noncommercial LIGA program at Beamline 3.3.2.

7. OPERATIONS UPDATE

(Contact: JPHarkins@lbl.gov)

The ALS is currently in a planned shutdown for installations and maintenance. The shutdown is progressing well thus far, with all scheduled projects proceeding as planned. An elliptically polarizing undulator (EPU) has been installed in Sector 11 for the new Molecular Environmental Sciences beamline. The supporting chicane magnets will not be installed until May 13, and it is anticipated that the EPU will be commissioned shortly thereafter. The storage ring survey has been completed and alignment of the storage ring is under way. Meetings are currently being held with each of the beamline scientists to confirm requirements for any beamline realignments, and time is scheduled on May 6 and 7 to align beamlines once the beam is turned back on. Higher-order mode dampers have been installed in the storage ring rf cavities and have been conditioned with high-power rf. Final conditioning with electron beam and commissioning of the controls will be done next week during start-up.

Other completed projects include installation of Beamline 4.2 tubes through the shield wall, installation of new quadrupole magnet controls, installation of fast-orbit feedback hardware and controls, modifications to the Sector 12 wireway, and upgrades to the storage-ring-rack water-flow monitor and interlock. Non-shutdown critical work being undertaken includes replacing the Beamline 5.3.1 mirror, modifications to the endstations at Beamlines 8.2.1 and 8.3.1, installation of the Beamline 11.0.2 M1 mirror, relocation of the Sector 12 clean room, and installation of a mezzanine platform. User operations are scheduled to resume at 12:00 a.m. on Thursday, May 9.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 198 May 8, 2002

Contents of This Issue:

1. KINESIN ACTION CRYSTALLIZED IN TWO KEY STATES

by Lori Tamura
(Contact: hirokawa@m.u-tokyo.ac.jp)

Without infrastructure, business grinds to a halt, and the business of a cell is no exception. Cells require an internal transportation system reliable and flexible enough to accommodate both the routine movement of organelles and the dramatic choreography of mitosis. In response, nature has engineered an intracellular rail system of sorts, in which a "motor" enzyme called kinesin hauls chromosomes and other cellular freight along microtubule tracks. Disruption of this system can lead to certain neurological disorders as well as cancer. To better understand how this system works, a team of researchers from the University of Tokyo and the University of California, San Francisco, working at the ALS and Stanford Synchrotron Radiation Laboratory, compared the structures of the kinesin mechanism when crystallized in two functionally critical states.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/51kinesin.html.

Publication about this research: M. Kikkawa, E.P. Sablin, Y. Okada, H. Yajima, R.J. Fletterick, N. Hirokawa, "Switch-based mechanism of kinesin motors," Nature 411, 439 (2001).

2. REMINDER: GENERAL SCIENCES PROPOSALS DUE JUNE 1

(Contact: alsproposals@lbl.gov)

The User Services Office is still accepting proposals from scientists who wish to conduct research as independent investigators in the general sciences during the running period from December 2002 to May 2003. The deadline for submissions is June 1, 2002. (This information does not apply to protein crystallography proposals, which have a separate process and schedule.) Scientists wishing to renew a previous proposal must fill in a one-page Experiment Report/Beamtime Request and submit it to the User Services Office by the June 1 deadline. The numeric rating for each proposal will be communicated to the investigator along with comments from the Proposal Study Panel, where appropriate. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

ALS User Program Administrator
alsuser@lbl.gov

Independent investigator process
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

3. ACTIVITY REPORT WINS INTERNATIONAL RECOGNITION

The 2000 ALS Activity Report, which recently received a top-level award in a regional technical publications competion (ALSNews Vol. 195), has gone on to win an award of "Excellence" at the international level (http://www.stc.org/2002_itpc_winners.html). The competitions are sponsored by the Society for Technical Communication (STC), the primary organization dedicated to promoting the arts and sciences of technical communication worldwide. To be considered for the STC's International Technical Publications Competition, entries must first advance through local chapter and regional competitions. The international winners are selected by three-judge panels that evaluate each entry for such qualities as production, design and typography, copy editing, content and organization, and graphics. In their feedback comments, the judges called the Activity Report "a beautifully designed and well written document" and "an impressive collection of information" that "effectively shows the scientific value and breadth" of the ALS. Congratulations and thanks to the Activity Report writing/editing/production team for putting together such an exemplary publication to represent the ALS!

4. RUTH PEPE, FORMER HEAD OF USER SERVICES, RETIRES
(Contact: GFKrebs@lbl.gov)

Ruth Pepe, who for many years served as head of the ALS User Services Office, is retiring this spring. In the last year, Ruth's responsibilities grew as she took on the role of ALS Division Administrator, assisting Director Daniel Chemla with the supervision and hiring of all administrative staff in the division. "Ruth has done an outstanding job during the seven years she has been at the ALS and I will personally miss her intelligence, energy, and creativity," Daniel said. "I would also like to congratulate Ruth on the marvelous staff she has assembled; it is why we can all look forward to a smooth transition." The staffing hole created by Ruth's retirement will quickly propagate through the ranks of the User Services Office: Bernie Dixon, who has worked in the User Services Office for five years (as Office Manager for the last year), will step in to fill Ruth's Division Administrator position, and Jeremy Coyne will fill Bernie's former role as the new User Program Administrator. A new job ad to fill the hole that Jeremy is leaving will be posted soon. Congratulations to Bernie and Jeremy and many thanks and best wishes to Ruth for a healthy and happy retirement.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Simon Clark (Berkeley Lab)
Felicia Betancourt (Berkeley Lab)

Beamline 5.0
Clifford Mol, Doug Dougan (Syrrx, Inc.)

Beamline 6.1.2
Gerd Schneider (Berkeley Lab)
Juergen Thieme (Univ. of Goettingen, Germany)

Beamline 7.0.1
Marjorie Olmstead (Univ. of Washington)
Adam Hitchcock (McMaster Univ., Canada)

Beamline 7.3.1.1
Z.Q. Qiu (Univ. of California, Berkeley)
Simone Anders (IBM Almaden Research Center)

Beamline 7.3.3
Greg Hura (Berkeley Lab)

Beamline 8.0.1
Satish Myneni (Princeton Univ.)
Anders Nilsson (Stanford Univ.)
Glenn Waychunas (Berkeley Lab)

Beamline 9.3.1
Heinz Frei (Berkeley Lab)
David McKeown (Catholic Univ. of America)

Beamline 9.3.2
Glenn Waychunas (Berkeley Lab)
Frank Ogletree (Berkeley Lab)

Beamline 10.0.1
John West (Daresbury Laboratory, UK)
Ron Phaneuf (Univ. of Nevada, Reno)

Beamline 10.3.1
Peter Weber (Univ. of California, Berkeley)

Beamline 10.3.2
Donald Sparks, Markus Grafe, David McNear (Univ. of Delaware)

6. OPERATIONS UPDATE
(Contact: JPHarkins@lbl.gov)

The ALS is currently in a planned shutdown for installations and maintenance. User operations are scheduled to resume at 12:00 a.m. on Thursday, May 9, 2002.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 199 May 22, 2002

Contents of This Issue:

1. LAST CALL: GENERAL SCIENCES PROPOSALS DUE JUNE 1

(Contact: alsproposals@lbl.gov)

Saturday, June 1, 2002, is the deadline for independent investigator proposals in the general sciences for the running period from December 2002 to May 2003. (This information does not apply to protein crystallography proposals, which have a separate process and schedule.) Scientists wishing to renew a previous proposal must fill in a one-page ALS Experiment Report and Request for Beamtime form and submit it to the User Services Office by the June 1 deadline. The User Services Office has sent email confirmations for all proposals received so far. If you submitted a proposal but have not received confirmation, please contact Jeremy Coyne at alsproposals@lbl.gov. The numeric rating for each proposal will be communicated to the investigator along with comments from the Proposal Study Panel, where appropriate. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

ALS User Program Administrator
alsuser@lbl.gov

Independent investigator process
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

2. BEAM BACK ON, REALIGNMENT CONTINUES

(Contact: JPHarkins@lbl.gov)

Major improvements were made to the ALS during the last month's shutdown. Several of the installations were completed without issue and have resulted in improved operations. The

chicane magnet in Sector 4 was replaced (to minimize beam perturbations resulting from operation of the elliptically polarizing undulator [EPU]) and is currently performing well. The higher-order-mode (HOM) dampers were installed in the storage ring rf cavities and have taken the load off the longitudinal feedback system. These dampers also make the rf system more stable under temperature variations. The controls are also much improved with the installation of the Sector 4 chicane and an increase in the bit resolution. Two continuing issues, however, still need to be resolved before user operation is optimized at all beamlines.

One major task during the shutdown was the survey and alignment of the storage ring. Immediate improvement in the storage ring beam was noticed upon startup. The alignment of the storage ring, in some cases, required the subsequent realignment of front-end and beamline components. Two days at the end of the shutdown were allocated for the alignment of front ends and beamlines with beam. While all requests for alignment time from beamline scientists were granted during this period, several beamlines required a second iteration; these are currently planned for the beamlines' next available beamtime.

A second major task was the installation of a new vacuum chamber and EPU for the Molecular Environmental Sciences beamline in Sector 11. While care was taken during these activities to protect the cleanliness of the vacuum chamber, some recovery time was expected and planned for in the schedule. Nevertheless, the vacuum recovery time extended into the startup and beyond because of mechanical problems. Although the vacuum is steadily improving, the beam lifetime as of May 17 was only 50% of optimum.

3. RECENT PUBLICATIONS

Bressler, C., M. Saes, M. Chergui, D. Grolimund, R. Abela, and P. Pattison, "Towards structural dynamics in condensed chemical systems exploiting ultrafast time-resolved x-ray absorption spectroscopy," J. Chem. Phys. 116(7), 2955 (February 2002).

Hellwig, O., D.T. Margulies, B. Lengsfield, E.E. Fullerton, and J.B. Kortright, "Role of boron on grain sizes and magnetic correlation lengths in recording media as determined by soft x-ray scattering," Appl. Phys. Lett. 80(7), 1234 (February 2002).

Hlawatsch, S., C.D. Garbe-Schonberg, F.F. Lechtenberg, A. Manceau, N. Tamura, D.A. Kulik, and M. Kersten, "Trace metal fluxes to ferromanganese nodules from the western Baltic Sea as a record for long-term environmental changes," Chem. Geol. 182(2-4), 697 (February 2002).

Holman, H.-Y, K. Nieman, D.L. Sorensen, C.D. Miller, M.C. Martin, T. Borch, W.R. McKinney, and R.C. Sims, "Catalysis of PAH biodegradation by humic acid shown in synchrotron infrared studies," Environ. Sci. Technol. 36(6), 1276 (March 2002).

Omori, S., Y. Nihei, E. Rotenberg, J.D. Denlinger, S. Marchesini, S.E. Kevan, B.P. Tonner, M.A. Van Hove, and C.S. Fadley, "Differential photoelectron holography: A new approach for three-dimensional atomic imaging," Phys. Rev. Lett. 88(5), 055504 (February 2002).

Qiu, Z.Q, and N.V Smith, "Quantum well states and oscillatory magnetic interlayer coupling," J. Phys.-Condens. Mat. 14(8), 169 (March 2002).

Sintchak, M.D., G. Arjara, B.A. Kellogg, J. Stubbe, and C.L. Drennan, "The crystal structure of class II ribonucleotide reductase reveals how an allosterically regulated monomer mimics a dimer," Nat. Struct. Biol. 9(4), 293 (April 2002).

4. JOB OPPORTUNITIES AT THE ALS

Listed below are a few ALS-related positions that are currently available. For more detailed information on a specific job, go to the Berkeley Lab Current Job Opportunities Web page (http://cjo.lbl.gov/), type the Job Requisition Number (shown below in parentheses) into the keyword search box, and click on the "GO" button (do not use the "return" key). For a complete listing of ALS-related openings, search on the keywords "Advanced Light Source."

Scientific Engineering Associate (014643). Provide multifunctional support for the Chemical Dynamics Beamline (9.0.2) and its scientific programs. The incumbent will become proficient in the operation, maintenance, and development of the beamline and its associated experimental endstations in order to provide optimal support of the operation.

Administrative Assistant III (014744). Provide specialized administrative services under general supervision, including drafting correspondence, reports, presentations, and meeting minutes; processing ALS visiting researchers and scholars; coordinating the travel and reimbursement process; allocating office space for guests and visitors; and providing assistance with conferences and workshops.

Beamline 12.0 Scientist (014747). Contribute to the Beamline 12.0 (photoemission branchline) scientific program in collaborations with users as well as through own research. Work closely with users to assess feasibility of experiments, design novel experiments and sample preparation techniques, and assist in data analysis and interpretation of results. Major responsibility for the day-to-day beamline operation, including overseeing an associate beamline scientist, postdocs, graduate students, and technicians, as well as making improvements to the beamline and endstation hardware and software.

Physicist Postdoc Fellow (014748). Develop instrumentation to enable studies of highly correlated electron systems using coherent soft x-ray scattering to probe spatiotemporal fluctuations in candidate thin-film magnetic recording materials. One-year appointment with the possibility of renewal based on performance and availability of funding.

Physicist Postdoc Fellow (014480). Work involves developing a code for computing charge and current density distributions in molecules with core-hole excitations and simulating the optical/x-ray nonlinear response functions. One-year appointment with the possibility of renewal based on performance and the availability of funding.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamlines 5.0.1, 5.0.2, 5.0.3
Vivian Li, Rashid Syed (Amgen)
Mark Knapp, ArmandoVillasenor, Peter Dunten (Roche Bioscience)
Django Sussman, Brett Chevalier, Eric Galburt, Betty Shen, Dave Goetz, Peter Rupert (Fred Hutchinson Cancer Research Center)
Andrea Olland, Joel Bard (Genetics Institute)
Weiru Wang, Dong Hae Shin (Berkeley Structural Genomics Center)
Steve Stayrook (Univ. of Pennsylvania)
Sridhar Prasad, Sheng Ye (Syrrx, Inc.)
Mark Collins, Ian Wilkinson, Joe Garrett, Christine Dunham, Alice Vrielink (Univ. of California, Santa Cruz)

Beamline 6.1.2
Mark Le Gros (Berkeley Lab)
Maria Juenger (Univ. of California, Berkeley)

Beamline 6.3.1
Maurizio Sacchi (Univ. Paris-Sud)
Yasuji Muramatsu (Japan Atomic Energy Research Institute)

Beamline 7.3.1.1
Christian Stamm (Stanford Linear Accelerator Center)
Stephen Urquhart (Univ. of Saskatchewan, Canada)

Beamline 8.0.1
Tony Van Buuren (Lawrence Livermore National Laboratory)
Ernst Kurmaev (Russian Academy of Sciences)

Beamlines 8.2.1
Greg Bowman (Univ. of California, Berkeley)

Beamline 8.3.1
Chris Bonagura, Kam Zhang (Plexxikon, Inc.)
Pan Hu, Maia Vinogradova, Adrian Keatinge-Clay, Seth Harris (Univ. of California, San Francisco)
Ernst Bergmann (Univ. of Alberta, Canada)

Beamline 9.3.2
Cheng Huan (National Univ. of Singapore)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of May 9 - 12 and 15 - 20, the beam reliability (time delivered/time scheduled) was 94%. Of the scheduled beam, 90% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 200 June 5, 2002

Contents of This Issue:

1. READERS TALK BACK: ALSNEWS SURVEY 2002

(Contact: alsnews@lbl.gov)

ALSNews reaches an important milestone today with the publication of its 200th issue. In its debut on November 1, 1994, ALSNews reported on the first images produced at Beamline 6.1.2 (red blood cells infected with the malaria parasite), the commencement of LIGA work at Beamline 10.3.2, and a summary of the 1994 Users' Meeting, where topics of discussion included "future scientific opportunities at the ALS such as protein crystallography and polymer microscopy," and "the possibility of building an infrared beamline at the ALS." The ALS has come a long way since then, and we hope that ALSNews has evolved as well to meet the needs of our ever-growing and increasingly diverse audience. After seven and a half years, this newsletter's distribution has reflected the growth in the ALS user community, increasing from a few hundred subscribers initially to nearly 2000 from over 20 countries today. We always appreciate it when our readers write with comments or suggestions. At this milestone, however, we would like to make a more systematic effort to find out what your needs are so that we can serve you more effectively. A short online survey can be found at http://www-als.lbl.gov/als/als_news/surveys/2002/. It should take only a few minutes to complete and will provide us with valuable feedback on how best to serve the ALS community.

2. PROTEIN CRYSTALLOGRAPHY PROPOSALS DUE JUNE 15

(Contact: pxproposals@lbl.gov)

Saturday, June 15, 2002, is the next deadline for independent investigator protein crystallography proposals for beamtime during the month of August 2002.

Scientists wishing to submit a proposal will need to fill out a Protein Crystallography Proposal form at http://alsusweb.lbl.gov/. For questions regarding the proposal process, please contact Jeremy Coyne at pxproposals@lbl.gov or 510-486-4518.

3. SUMMER SCHOOL PHYSICAL SCIENCES COURSE STILL OPEN

(Contacts: nilsson@ssrl.slac.stanford.edu, attwood@eecs.berkeley.edu)

There's still room in the 2002 Stanford-Berkeley Synchrotron Summer School physical sciences course. This year the summer school will be held at Stanford University July 7-13. The program will provide a comprehensive overview of the synchrotron radiation process, requisite technologies, and a broad range of scientific applications. It will cover both fundamentals of extreme ultraviolet, soft x-ray, and hard x-ray synchrotron radiation and their use in spectroscopy and diffraction. Science applications will be given both in physics, chemistry, and materials science. Lectures will be presented by scientists from the sponsoring organizations and affiliated user communities. The attendees will participate in experiments on different beamlines at the ALS and make visits inside the storage ring at the Stanford Synchrotron Radiation Laboratory (SSRL). For more information, see the web page at http://smb.slac.stanford.edu/SR-School/ps2002.html.

4. ALS AWARDS AND HONORS

The ALS is pleased to acknowledge those in its orbit whose achievements have been recognized through awards and honors. Congratulations on a job well done!

Hendrik Ohldag, graduate-student member of the Beamline 7.3.1.1 (PEEM2) participating research team, received a Materials Research Society (MRS) Gold Award at the society's Spring 2002 meeting in San Francisco. The MRS Graduate Student Awards are highly competitive and are intended to honor and encourage graduate students whose academic achievements and current materials research show a high order of excellence and distinction. Finalists for the awards participate in a special student-presentation judging session at one of the society's meetings. Criteria for selection include thoroughness of the work; originality and independence of the contribution; depth of understanding of the topic, methodologies, and context; and finally, promise for future achievement. Hendrik is affiliated with the Stanford Synchrotron Radiation Laboratory, the Advanced Light Source, and the University of Duesseldorf, Germany. The work described in his winning paper, "Understanding Magnetic Coupling at Antiferromagnetic/Ferromagnetic Interfaces - A Dichroism Spectromicroscopy Study," was also the subject of his award-winning student poster at the 2001 ALS Users' Meeting.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Felicia Betancourt (Berkeley Lab)
Dan Fried (Univ. of California, San Francisco)
T.J. Wilkinson (Berkeley Lab)
Kelly Knutsen (Univ. of California, Berkeley)
Ted Raab (Carnegie Institution of Washington)
Mary Kauffman (Idaho National Engineering and Environmental Laboratory)

Beamlines 5.0.1, 5.0.2, 5.0.3
Dong Hae Shin, Weiru Wang (Berkeley Structural Genomics Center)

John Day, Alex McPherson, Lisa Harris, Evan Bursey (Univ. of California, Irvine)
Mark Knapp, Armando Villasenor, Pete Dunten (Roche Bioscience)
Zhiqiang Lu, Joshua Sakon, Jeffrey Wilson (Univ. of Arkansas)
Seok-Yong Lee, Annie Roberts (Berkeley Lab)

Beamline 6.3.1
Yasuji Muramatsu (Japan Atomic Energy Institute)

Beamline 7.0.1
Jim Tobin (Lawrence Livermore National Laboratory)
Brian Tonner (Univ. of Central Florida)
Harald Ade (North Carolina State Univ.)
Jinghua Guo (Berkeley Lab)
Steve Kevan (Univ. of Oregon)
Marjorie Olmstead (Univ. of Washington)

Beamline 8.0.1
Jeffrey Kortright (Berkeley Lab)
Eric Fullerton, Olav Hellwig (IBM Almaden Research Center)
Dave Ederer (Tulane Univ.)
Tom Callcott (Univ. of Tennessee)
Alex Moewes (Univ. of Saskatchewan, Canada)
Ernst Kurmaev (Russian Academy of Sciences)

Beamline 8.2.1
Greg Bowman (Univ. of California, Berkeley)

Beamline 8.3.1
Rachel Fezzie, Emmanuel Skordalakes, Scott Classen, Kevin Corbett (Univ. of California, Berkeley)
Jamie Cate, Anton Vila-Sanjurjo, William Ridgeway (Univ. of California, Berkeley)
Tracy Young, Jim Endrizzi (Univ. of California, Berkeley)
Evette Radisky (Univ. of California, Berkeley)
Chris Bonagura, Kam Zhang, Abhinav Kumar (Plexxicon, Inc.)
Maia Vinogradova (Univ. of California, San Francisco)
Bill Harries (Univ. of California, San Francisco)
Jessica Bell (Univ. of California, San Francisco)

Beamline 10.0.1
Nora Berrah (Western Michigan Univ.)
Duane Jaecks (Univ. of Nebraska-Lincoln)

Beamline 10.3.2
Geraldine Sarret (Centre National de la Recherche Scientifique, France)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of May 21 - 26 and May 30 - June 2, the beam reliability (time delivered/time scheduled) was 95%. Of the scheduled beam, 91% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 201 June 19, 2002

Contents of This Issue:

1. CHEMLA TO STEP DOWN FROM MATERIALS SCIENCES POST

After four years of performing double-duty as director of two large divisions at Berkeley Lab, ALS Division Director Daniel Chemla has announced that he will step down as director of the Lab's Materials Sciences Division (MSD) and focus his attention on the ALS and his own research group. Daniel, who has been MSD director since 1990, was asked by Berkeley Lab Director Charles Shank to take on leadership of the ALS as well in 1998. Since then, Daniel has guided the ALS through a difficult transition period into a new phase of existence: important reviews have been passed, the superbend upgrade has been successful, user numbers are steadily climbing, and future facility developments such as a femtosecond beamline, an ultrahigh-resolution spectroscopy beamline, and a far-infrared ring are in the planning stages. On the materials sciences side (but with implications for the ALS as well), Daniel was instrumental in persuading the U.S. Department of Energy (DOE) to fund, as part of its Nanosciences Initiative, the Molecular Foundry at Berkeley Lab. With that project approved and well on its way, Daniel felt it was time to step down from MSD and to concentrate on the ALS, where he says "there is a lot of work to do and a lot of exciting things on the horizon." Berkeley Lab Director Shank, who praised Daniel's "extraordinary impact," will begin a search process for an MSD successor in a few weeks. In the meantime, Daniel will continue to manage both divisions until a replacement is found.

2. WITH EPU INSTALLED, MES BEAMLINE READIES FOR FALL DEBUT

(Contact: DKShuh@lbl.gov)

The successful installation of the ALS's second elliptically polarizing undulator (EPU) in Sector 11 of the storage ring during the April shutdown marked an important milestone in the construction of a major new ALS facility: a beamline dedicated to molecular environmental science (MES). MES research focuses on molecular-scale understanding of environmentally important species--their chemical and physical forms, spatial distribution, and reactivity in natural and man-made materials--as well as the processes (chemical and biological) that affect their stability, transformations, mobility, and toxicity. It is an interdisciplinary field involving complex interactions that make high-intensity, tunable synchrotron light an indispensable research tool. The high brightness and flux of the new beamline will allow unparalleled spatial and spectral resolution. A significant fraction of experiments being performed at existing,

oversubscribed beamlines at the ALS are MES-related and will benefit from an MES-optimized and dedicated beamline. The project is on track to be completed on schedule and at budget this fall.

Beamline 11.0.2 will produce synchrotron radiation from 75 to 2000 eV with a flux of 10^12 photons/s. The beamline will include a wet spectroscopy endstation (beam size at focal point: 7 x 50 micrometers) and a high-pressure photoelectron spectroscopy endstation; in addition, a scanning transmission x-ray microscope (STXM) will be transferred from Beamline 7.0.1. The research program will exploit the unique capabilities of the endstations coupled to the specialized optical design of the beamline. Its "wet" capabilities will help provide a bridge from model systems to the real world. The spectroscopic tools available in the surface-science-style endstations include microbeam near-edge x-ray absorption fine structure (NEXAFS), photoelectron spectroscopy (PES), and several methodologies that fall under x-ray emission spectroscopy (XES). Examples of initial studies include the investigation of water, small molecules, and metal ions at representative interfaces. Other planned experiments will explore catalysis under realistic pressure conditions, the nature of liquid surfaces, and the interactions of metal ions with small, mineralogically important particles.

David Shuh (Chemical Sciences Division) is the MES beamline project leader, Tony Warwick is the project manager, Jim Comins is the lead engineer, Steve Marks is the insertion device engineer, and Tolek Tyliszczak is the beamline scientist. Members of the MES research team include Miquel Salmeron (Materials Sciences Division), Glenn Waychunas (Earth Sciences Division), Anders Nilsson (Univ. of Stockholm and Stanford Univ.), Gordon Brown, Jr. (Stanford Univ.), Satish Myneni (Princeton Univ.), Scott Chambers (Pacific Northwest National Laboratory), Sam Traina (Ohio State Univ.), Brian Tonner (Univ. of Central Florida), Lou Terminello (Lawrence Livermore National Laboratory), David Clark (Los Alamos National Laboratory), and John Gland (Univ. of Michigan). The MES project is supported by the U.S. DOE, Office of Science, Office of Basic Energy Sciences, Division of Chemical Sciences, Geosciences, and Biosciences, and Division of Materials Sciences.

3. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone
(Contact: rwf@physics.berkeley.edu)

The next meeting of the Users' Executive Committee (UEC) will be held July 17 at Berkeley Lab. Please email me or other members of the UEC with issues or comments for discussion. The agenda now includes planning for the Users' Meeting, housing for visiting users, and a plan for moving away from traditional participating research teams toward a system of smaller, more flexible "approved programs" in an effort to address the realities of third-generation synchrotron sources.

The Users' Meeting is scheduled for Thursday and Friday, October 10 and 11. More information will soon be available on a Web site; the meeting will be chaired by Eli Rotenberg (ERotenberg@lbl.gov) and John Bozek (JDBozek@lbl.gov). We are currently seeking suggestions for workshops to be held in conjunction with the Users' Meeting. Please email the chairs with your ideas for topics and leaders.

4. ALSNEWS TRANSITIONS TO DAILY FORMAT*

(Contact: alsnews@lbl.gov)

The ALSNews survey results are in and the overwhelming majority of respondents requested that ALSNews be delivered daily by HTML-enhanced email with exhaustive machine status updates. . .

*Well, not really. But now that we have your attention, we'd like to point out that there's still time to fill out the ALSNews reader survey (http://www-als.lbl.gov/als/als_news/surveys/2002/). It's quick and painless and provides the rare opportunity to affect the flow of information across your desk. Want more science highlights? Don't care about who's in town? Or perhaps, just possibly, you find the content and format of ALSNews to be fine just the way it is--that's good data too! Many thanks to all those who have already responded; your input is highly valued and much appreciated.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Mary Kauffman (Idaho National Engineering and Environmental Laboratory)
Karl Nieman (Utah State Univ.)
T.J. Wilkinson (Berkeley Lab)
Felicia Betancourt (Berkeley Lab)
Yi-Chung Lo (Synchrotron Radiation Research Center, Taiwan)

Beamlines 5.0.1, 5.0.2, 5.0.3
Joe Kim, Rashid Syed, Vivian Li (Amgen)
Gyorgy Snell, Jacek Nowakowski (Syrrx, Inc.)
Yvonne Newhouse, Karl Weisgraber, Danny Hatters, Elizabeth Brooks, Clare Peters-Libeu (Univ. of California, San Francisco)
Xiaoling Xie, Ernst Ter Haar (Vertex Pharmaceuticals Inc.)
Ed Berry, David Cobessi,Yusef Collins, Li-Shar Huang Berry (Berkeley Lab)
Brian Chapados, Li Fan (The Scripps Research Institute)
Kevin Compher, David Cox (Univ. of Pennsylvania)
Brent Segelke, Tim Lekin, Todd Corzett (Lawrence Livermore National Laboratory)
Brenda Schulman, Daniel Minor (St. Jude Children's Research Hospital)
Mark Knapp, Armando Villasenor, Pete Dunten (Roche Bioscience)
Zhang Bao Xu, Weixin Xu (Wyeth-Ayerst Research)
Brigitte Schobert, Janos Lanyi (Univ. of California, Irvine)

Beamline 6.3.1
Dhanesh Chandra (Univ. of Nevada, Reno)
Shuji Matsuo (Fukuoka Univ., Japan)
Ponnusamy Nachimuthu (Univ. of Nevada, Las Vegas)

Beamline 7.0.1
Byron Freelon (Berkeley Lab)
Marjorie Olmstead (Univ. of Washington)
Miquel Salmeron (Berkeley Lab)
Satish Myneni (Princeton Univ.)
Brian Tonner (Univ. of Central Florida)
Harald Ade (North Carolina State Univ.)
Jinghua Guo (Berkeley Lab)

Beamline 8.2.1
Alex Nickitenko, Carmen Moure, Bornali Chakravarty (Baylor College of Medicine)

Beamline 8.3.1
David Birdsall, Stehanie Wang (Univ. of California, San Francisco)
Chris Bonagura (Plexxicon, Inc.)
Mark Robien, Doug Davies, Claire O'Neal, Dan Mitchell (Univ. of Washington)
Peter Hwang (Univ. of California, San Francisco)
Maia Vinogradova (Univ. of California, San Francisco)
Andrew Shiau (Univ. of California, San Francisco)

Beamline 9.3.1
James Cotter (Univ. of Nevada, Reno)
Stefano Marchesini (Berkeley Lab)

Beamline 10.0.1
Z.X. Shen (Stanford Univ.)
Erwin Poliakoff (Louisiana State Univ.)
Duane Jaecks (Univ. of Nebraska-Lincoln)

Beamline 10.3.2
Alain Manceau (Berkeley Lab)
Andy Smith (Daresbury Laboratory, UK)
Satish Myneni (Princeton Univ.)

6. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of June 4 - 9 and 11 - 17 (with June 11 and 12 in 1.5 GeV mode), the beam reliability (time delivered/time scheduled) was 95%. Of the scheduled beam, 88% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 202 July 3, 2002

Contents of This Issue:

1. EUV LITHOGRAPHY PROOF IS IN THE PRINTING

by Art Robinson
(Contact: PNaulleau@lbl.gov)

An old adage says, "If you can't measure it, you can't make it." So it's no accident that metrology beamlines built and operated at the ALS under the auspices of Berkeley Lab's Center for X-Ray Optics (CXRO) have been instrumental in a 5-year, $250-million industry - national laboratory effort to bring extreme ultraviolet (EUV) lithography to the commercial stage. EUV lithography is the future chip-printing technology that the Semiconductor Industry Association began backing in 2001 as the likely successor, around the year 2007, to the reigning family of refractive optical lithography techniques. The EUV promise is that with wavelengths 50 times smaller than those of visible light, it will be able to draw circuit patterns just tens of nanometers wide. In comparison, the current industry state-of-the-art chips have patterns with 130-nm lines.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/53euv.html.

Publication about this research: P.P. Naulleau et al., "Static Microfield Printing at the Advanced Light Source with the ETS Set-2 Optic," Proc. SPIE 4688-05 (2002, in press).

2. ALS DOCTORAL FELLOWSHIP WINNERS ANNOUNCED

(Contact: ZHussain@lbl.gov)

The ALS is extremely pleased to announce this year's winners of ALS Doctoral Fellowships: Alejandro Aguilar (Univ. of Nevada, Reno, ion spectroscopy), Andreas Augustsson (Uppsala University, molecular and material physics), Henry Chong (Univ. of California, Berkeley, femtosecond x-ray spectroscopy with a slicing source), David Edwards (Princeton University, environmental geochemistry), Daniel Rolles (Technical University Berlin, atomic and molecular physics), and Zhe Sun (University of Colorado, condensed matter physics). These exceptional Ph.D. students have been selected to perform a major part of their thesis work at the ALS during a one-year appointment covering the 2002 - 2003 academic year. For Alejandro and Henry, this will be a continuation of their fellowship grants from last year. Congratulations to all six! The selection committee consisted of Roger Falcone (Univ. of California, Berkeley, and ALS Users' Executive Committee Chair), Zahid Hussain (ALS), Steve Kevan (Univ. of Oregon and ALS

Science Advisory Committee Chair), Zhi-Xun Shen (Stanford Univ.), and Neville Smith (ALS). Detailed information about the fellowships, along with links to frequently asked questions and the application form, can be found at http://www-als.lbl.gov/als/fellowships/index.html.

3. ADJUSTMENTS MADE TO RAPID-ACCESS PROPOSAL PROCEDURE
(Contact: pxproposals@lbl.gov)

The ALS's rapid-access system for independent investigators in protein crystallography is being fine-tuned to better accommodate the actual rate of proposal submission observed over the past few months. Essentially, the system will expand from a monthly cycle to a two-month cycle. Proposals would be due on the 15th of the first month of each cycle for beamtime to be awarded in the next cycle (i.e., a month and a half later). For example, the last proposal deadline was June 15 for beamtime to be awarded in the August - September run cycle. The next deadline will be August 15 for beamtime to be awarded in the October - November run cycle. (There will be no proposal deadlines in July or September.) Proposal forms as well as up-to-date information about beamtime cycles and submission deadlines are posted at http://www-als.lbl.gov/als/quickguide/independinvest.html. Also, schedules for the protein crystallography beamlines can be found at http://www.lbl.gov/LBL-Programs/mcf/Schedules/ScheduleMain.htm. As always, feedback from the protein crystallography community would be very welcome at this stage. Please send any questions or comments to pxproposals@lbl.gov.

4. CORRECTION TO USERS' MEETING DATES

This year's ALS Users' Meeting will be held at Berkeley Lab Thursday through Saturday, October 10 - 12, 2002, not October 10 - 11, as was mentioned in the last issue of ALSNews. More information will be posted online as soon as it becomes available.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Simon Clark (Berkeley Lab)

Beamline 4.0.2
Chuck Fadley (Univ. of California, Davis, and Berkeley Lab)
Dan Waddill (Univ. of Missouri-Rolla)

Beamlines 5.0.1, 5.0.2, 5.0.3
Ed Berry, David Cobessi, LiShar Huang, Yusef Collins, Cesar Chavez (Berkeley Lab)
Janos Lanyi, Brigitte Schobert-Lanyi (Univ. of California, Irvine)
Joel Bard, Kevin Parris (Genetics Institute)
Dong Hae Shin, Shengfeng Chen, Jinyu Liu (Berkeley Structural Genomics Center)
Steve Holbrook, Ursula Schulze-Gahmen (Berkeley Lab)
Gyorgy Snell, Dave Hosfield (Syrrx, Inc.)

Beamline 7.0.1
Harald Ade (North Carolina State Univ.)
Brian Tonner (Univ. of Central Florida)

Jim Tobin (Lawrence Livermore National Laboratory)

Beamline 7.3.1.1
Z.Q. Qiu (Univ. of California, Berkeley)
Simone Anders (IBM Almaden Research Center)

Beamline 7.3.3
Teresa Head-Gordon (Berkeley Lab)

Beamline 8.0.1
Richard Saykally (Univ. of California, Berkeley)
David Sherman (Univ. of Bristol, UK)

Beamline 9.3.2
Javier Diaz (Univ. de Oviedo, Spain)

Beamline 10.0.1
Ron Phaneuf (Univ. of Nevada, Reno)
Z.X. Shen (Stanford Univ.)

Beamline 10.3.2
Alain Manceau (Berkeley Lab)

5. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user run of June 19 - 24, the beam reliability (time delivered/time scheduled) was 95%. Of the scheduled beam, 79% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to

alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 203 July 17, 2002

Contents of This Issue:

1. STANDING WAVES PROBE NANOWEDGE INTERFACES

by Art Robinson
(Contact: CSFadley@lbl.gov)

Structures with nanometer-scale dimensions are ever more important in science and technology. Integrated circuits are the most familiar example, but nanostructures of a different type are also commercialized in magnetic read heads for high-density data storage and may soon appear in magnetic memory chips. With the increased importance in such nanostructures of atoms residing at buried solid - solid interfaces, characterizing buried interfaces becomes a crucial step in understanding mechanisms and developing new devices based on these state-of-the-art materials. For example, new methods to nondestructively study buried interfaces would help to clarify the nature of both the giant magnetoresistance effect and exchange biasing, two key phenomena that make magnetic nanostructures useful. To address this problem, a group led by researchers from Berkeley Lab and the University of California, Davis, has now combined the technique of generating standing waves of circularly polarized soft x rays at ALS Beamline 4.0.2 with the growth of wedge-shaped samples. In particular, the researchers demonstrated the ability to map both composition and magnetization across an iron - chromium interface by means of core-level photoelectron spectroscopy, magnetic circular dichroism, and parallel mathematical modeling.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/55wave_probe.html.

Publication about this research: S.-H. Yang et al., "Probing buried interfaces with soft x-ray standing wave spectroscopy: application to the Fe/Cr interface," J. Phys.: Condens. Matter 14, L407 (2002).

2. PANEL ALLOCATES BEAMTIME, SEEKS NEW MEMBERS

(Contact: NVSmith@lbl.gov)

The ALS Proposal Study Panel (PSP) met on Friday, July 12, to discuss and rank some 70 new independent investigator proposals for general sciences research on ALS beamlines. Including the proposals that were rolled over from the last cycle, there was a total of about 160 proposals requesting beamtime during the upcoming running period from December 2002 through May 2003. This does not include the protein crystallography proposals, which are dealt with

separately. Proposal submitters will be notified individually of the PSP results, and the distribution of scores will be posted at http://www-als.lbl.gov/als/quickguide/pspscores.html as soon as it becomes available.

Two members of the PSP will rotate off for the next cycle: Gwyn Williams (Jefferson Laboratory) and Steve Southworth (Argonne National Laboratory). The ALS thanks Gwyn and Steve for the outstanding contribution they have made to the ALS scientific program. The remaining panel members are Tomas Baer (University of North Carolina), Adam Hitchcock (McMaster University), Chair Yves Idzerda (Montana State University), Theodore Madey (Rutgers University), Dale Sayers (North Carolina State University), and Kevin Smith (Boston University).

The ALS is now accepting nominations to replace the two leaving panel members. To best cover the range of science at the ALS, the nominees should be expert in atomic, molecular, and optical physics and/or infrared physics. Please send your nominations directly to Neville Smith (NVSmith@lbl.gov).

3. COMMITTEE FORMED TO ENHANCE DIVERSITY AT ALS

(Contact: GFKrebs@lbl.gov)

The ALS Diversity Committee held its first meeting on Tuesday, July 9. Members include ALS staff members Elke Arenholz, Liz Moxon, Neville Smith, Zahid Hussain, Ernie Glover, and Chair Gary Krebs. ALS Division Director Daniel Chemla started the meeting off with a few words about the importance of developing a long-term strategy for diversity in the division. Harry Reed of Berkeley Lab's Workforce Diversity Office and Kamala Green of the Human Resources Division helped lead a discussion about the importance of recruitment, retention, and education for improving diversity in the division as well as in Berkeley Lab.

The meeting was lively, and many exciting possibilities for enhancing diversity were discussed. The committee eventually hopes to develop a few guidelines to offer the various hiring committees in the division. Toward this end, Harry, Kamala, and Gary agreed to examine a successful program in another division (for recruiting technicians with B.S. degrees) to determine how it might be instituted at the ALS. At the graduate-student level, the existing ALS fellowship program (http://www-als.lbl.gov/als/fellowships/index.html), coordinated by Zahid and Neville, will encourage applications from underrepresented groups. Neville also described a possible model for the ALS in a Bell Labs program that keeps talented underrepresented undergraduate students in the Ph.D. pipeline. Various other outreach programs were discussed, including the division's summer student program and a program at Lawrence Livermore National Laboratory that sends speakers to colleges and universities with underrepresented groups. To see the division's current diversity plan, go to http://www.lbl.gov/Workplace/WFDAP/plans/ALS.html.

4. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone
(Contact: rwf @physics.berkeley.edu)

Planning for the Users' Meeting this fall is well underway. As in recent years, workshops will be a major part of the meeting, and tentative workshop topics proposed so far include polarized detectors and measurements, infrared spectroscopy, x-ray microdiffraction, high pressure science, and tomography.

The UEC would like to hear from any users interested in sponsoring a workhop at this year's ALS Users' Meeting. Contact Eli Rotenberg (ERotenberg@lbl.gov) or John Bozek (JDBozek@lbl.gov) as soon as possible with your suggestions.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Felicia Betancourt (Berkeley Lab)
T.J. Wilkinson, Mario Ortega (Berkeley Lab)
Neli Tsibakhashvili (Georgian Academy of Sciences, Republic of Georgia)
Karl Nieman (Utah State Univ.)
Ted Raab (Carnegie Institute of Washington)
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Stephen Cramer (Univ. of California, Davis)
Joachim Stohr (Stanford Synchrotron Radiation Laboratory)

Beamlines 5.0.1, 5.0.2, 5.0.3
Louis Lim, Nicole Guinn, Alice Vrielink (Univ. of California, Santa Cruz)
Marc Jacobs (Vertex Pharmaceuticals)
Daniel Knighton, Hans Parge, Samantha Greasley (Pfizer)
Geoffrey Chang, Christopher Roth (The Scripps Research Institute)
Gyorgy Snell (Syrrx, Inc.)

Beamline 7.0.1
Dan Dessau (Univ. of Colorado at Boulder)
Jim Tobin (Lawrence Livermore National Laboratory)
Harald Ade (North Carolina State Univ.)
Brian Tonner (Univ. of Central Florida)

Beamline 7.3.1.1
Stephen Urquhart (Univ. of Saskatchewan, Canada)
Shirley Chiang (Univ. of California, Davis)
Adam Hitchcock (McMaster Univ., Canada)

Beamline 7.3.3
Alain Manceau (Berkeley Lab)
Tatiana Kirpichtchikova (Univ. Joseph Fourier, France)

Beamline 8.0.1
David Sherman (Univ. of Bristol, UK)

Beamline 8.2.1
John Tesmer, Jeff Almrud, David Lodowski, Romana Kristelly (Univ. of Texas at Austin)
Greg Bowman (Univ. of California, Berkeley)
Paulene Quigley, Claire O'Neal, Doug Davies (Univ. of Washington)

Beamline 8.3.1
Ernst Bergmann, Karla Krewulak, Kirsty Dunlop, Bart Hazes (Univ. of Alberta, Canada)
Scott Classen, Joseph Mougous (Univ. of California, Berkeley)
Chris Bonagura, Weiru Wang, Heike Krupka, Abinav Kumas (Plexxicon, Inc.)
Seth Harris (Univ. of California, San Francisco)
Julian Chen (Univ. of California, San Francisco)

Beamline 9.0.1
Larry Sorenson (Univ. of Washington)

Beamline 9.0.2
Laurie Butler (University of Chicago)

Beamline 10.0.1
Nora Berrah (Western Michigan Univ.)
Dan Dessau (Univ. of Colorado at Boulder)

Beamline 10.3.2
Dale Sayers (North Carolina State Univ.)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of June 25 - July 2 and July 5 - 8, the beam reliability (time delivered/time scheduled) was 96%. Of the scheduled beam, 79% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley

National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 204 July 31, 2002

Contents of This Issue:

1. BES REVIEW: GREAT STRIDES MADE, FURTHER STEPS POSSIBLE

(Contact: NVSmith@lbl.gov)

Reviewers from the U.S. Department of Energy's Office of Basic Energy Sciences (DOE BES) report that the ALS is an "extraordinary asset to the scientific community" and that recent developments such as the superbend upgrade are "clearly revolutionary." According to review committee chair Pedro Montano of the BES Materials Science and Engineering Division, an "increase in the scope and quality" of ALS science was the "dominant impression" left on the review committee members. "The changes that have taken place in recent years in management and operation," wrote Montano in a letter summarizing the reviewers' comments, have made the ALS "our premier facility for UV and soft x-rays." However, the reviewers also identified several concerns and made a number of recommendations, noting that there are "great opportunities for improvements and efficient use of resources even in a well-run productive national facility."

The review--one in a series of reviews of the four DOE-funded synchrotron light sources--took place in February at the ALS, where the reviewers spent two days talking and listening to representatives of the facility's management, staff, and users. A list of questions posed by the reviewers to the ALS involved issues such as beamtime allocation, alternatives to participating research team (PRT) models, cost effectiveness, and future trends, plans, and potential problems. Bill Oosterhuis of BES gave a presentation on the light source reviews to a meeting of the full BES Advisory Committee on July 23.

Concerns identified by reviewers in their report included "troubled" PRTs, prioritizing investments in the various photon energy ranges, ensuring a sufficient user community for a proposed infrared ring, and fine-tuning spending between the Scientific Support Group and Experimental Systems Group. The reviewers' list of recommendations included centralizing the beamline scheduling process, transferring operation of BES beamlines from PRTs to the ALS, increasing beamline support staff, and providing insertion devices and front ends for all new BES beamlines. ALS Division Deputy for Science Neville Smith and User Services Group Leader Gary Krebs plan to meet with BES officials at DOE Headquarters in early August to respond to the concerns raised by the review and discuss ways to implement its recommendations.

2. UEC CORNER: NOTES FROM THE USERS' EXECUTIVE COMMITTEE

by Roger Falcone
(Contact: rwf @physics.berkeley.edu)

The User's Executive Committee met on July 17. I will briefly summarize the meeting.

We had a discussion of the visit to Washington, D.C., by light-source user representatives (including our Harald Ade and Jennifer Doudna) to tell legislators about science at the light sources. This annual activity seems to be very useful for educating legislative and executive staff about the successes of the investment in DOE science facilities. We plan to continue this effort with twice-annual visits to Washington. A briefing packet is available from Harald (harald_ade@ncsu.edu) for users who wish to contact their local congressional representatives.

Planning for the October 10 - 12 Users' Meeting is proceeding; Eli Rotenberg (ERotenberg@lbl.gov) and John Bozek (JDBozek@lbl.gov) are the co-chairs. Details will be mailed out to users soon; in addition, the meeting Web site at http://www-als.lbl.gov/als/usermtg/ will be updated as new information becomes available. Several workshops associated with the meeting are being planned, and suggestions for additional workshops are welcome (contact Eli or John). In addition to presenting a strong scientific program, we plan to conduct a town meeting as usual to discuss issues and to finalize the nominations for new members of the UEC. (Please consider running for election!)

Three proposed changes to the ALS were extensively discussed. These include "centralized scheduling" (a more centralized way of allocating and recording beamtime), "approved programs" (a new mode of beamline organization for core groups of users), and increased scientific and technical staff to assist users as the ALS assumes increased responsibility for the operation of beamlines. The UEC gave input to ALS management on these topics. The ALS is currently in discussion with the DOE regarding these changes, and we expect to hear more soon.

Planning for an expansion of housing units for visitors is underway, with a recently formed Berkeley Lab committee looking at long-term solutions such as a building for on-site housing. Gary Krebs and Bob Camper, head of the Berkeley Lab Facilities Department, have been appointed co-chairs of the committee by Sally Benson, Berkeley Lab's Deputy Director. For the near term, ALS management has promised to look at increasing the number of apartments available. The current ALS apartments are a highly utilized resource and a successful program.

3. SAC TACKLES FULL AGENDA

(Contact: GFKrebs@lbl.gov)

The ALS Scientific Advisory Committee (SAC) addressed a wide range of topics during a recent two-day meeting held at the ALS on July 18 - 19. The SAC meets at least twice yearly to advise Berkeley Lab and ALS management on issues relating to ALS operations, resource allocation, strategic planning, and PRT proposals and performance. At this latest meeting, SAC members heard and discussed reports on a number of important reviews, including the SAC-requested magnetic materials cross-cutting review, the Beamline 7.0.1 PRT review, and the recent review by DOE BES (see item 1 above). The committee spent some time discussing implementation of a more centralized "approved programs" model to replace the current PRT beamline

organization. Proposals for a superconducting undulator femtosecond slicing source, an meV elliptically polarizing undulator (EPU) beamline, and a high-pressure superbend beamline were presented, along with supporting talks on new scientific opportunities in nanomagnetism, ultrafast science, soft x-ray inelastic scattering, and coherent infrared spectroscopy.

In attendance at this meeting were SAC members Jeffrey Bokor (Univ. of California, Berkeley), John Carruthers (Intel Corp.), Wolfgang Eberhardt (BESSY GmbH, Germany), Roger Falcone (Univ. of California, Berkeley), Yves Idzerda (Montana State Univ.), Chair Stephen D. Kevan (Univ. of Oregon), Alain Manceau (Berkeley Lab), Anders Nilsson (Stanford Synchrotron Radiation Laboratory/Stockholm Univ., Sweden), Sunil Sinha (Univ. of California, San Diego), John Spence (Arizona State Univ.), Anthony Starace (Univ. of Nebraska-Lincoln), and Louis J. Terminello (Lawrence Livermore National Laboratory). This was the last meeting for Manceau, Bokor, and Terminello, who will rotate off the SAC. New members will be added soon to replace the three who are leaving.

4. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS. (The ALS will be operating in two-bunch mode August 6 - 19.)

Beamline 1.4.3
Neli Tsibakhashvili (Georgian Academy of Sciences, Republic of Georgia)
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Dan Waddill (Univ. of Missouri-Rolla)
Nora Berrah (Western Michigan Univ.)

Beamline 5.0.1
Joshua Warren, Jeffrey Taylor (Duke Univ.)
James Bowie, Salem Faham, Hoang Tran, Emiko Bare (Univ. of California, Los Angeles)

Beamline 5.0.2
Catherine Drennan, Tzanko Doukov, Jessica Vey, Fred Berkovitch (Massachusetts Inst. of Technology)
Mark Knapp (Roche Bioscience)
Ben Luisi (Cambridge Univ., UK)

Beamline 5.0.3
Linda Brinen, Ashley Deacon, Mitch Miller (Stanford Synchrotron Radiation Laboratory)
Gyorgy Snell (Syrrx, Inc.)

Beamline 7.0.1
Z.Q. Qiu (Univ. of California, Berkeley)
Ivan Schuller (Univ. of California, San Diego)
Satish Myneni (Princeton Univ.)

Beamline 7.3.3
King-Ning Tu (Univ. of California, Los Angeles)

Beamline 8.0.1
Dennis Lindle (Univ. of Nevada, Las Vegas)

Beamline 10.0.1
Nora Berrah (Western Michigan Univ.)
Z.X. Shen (Stanford Univ.)

5. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of July 9 - 14, 17 - 22, and 23 - 28, the beam reliability (time delivered/time scheduled) was 97%. Of the scheduled beam, 85% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 205 August 14, 2002

Contents of This Issue:

1. DOE MANDATES CHANGES TO LIGHT-SOURCE OPERATIONS

(Contact: GFKrebs@lbl.gov)

On August 2, top officials of the U.S. Department of Energy's Office of Basic Energy Sciences (BES) met with managers from the four major U.S. light sources to discuss issues concerning participating research teams (PRTs), also known as collaborative access teams (CATs), and general users (independent investigators). BES officials Pat Dehmer, Iran Thomas, Bill Oosterhuis, Pedro Montano, and Bob Astheimer issued a mandate to the light sources to begin evolving away from the old PRT/CAT system and to centralize beamtime scheduling.

While the PRT/CAT system of access was useful in helping to build up beamlines during earlier growth phases, BES believes that in a steady state, the only stable situation is one in which the beamlines are operated and maintained by the facility. BES expects the transition to take place over a period of a few years--in some cases, several years--so that previous memoranda of understanding (MOUs) and commitments can be honored. As for the centralized scheduling change, the impetus was a recent Inspector General audit on beamline usage. Centralized scheduling was recommended as a way to achieve greater access to the beamlines. In addition, BES will require that light sources use the same principles whether granting normal or proprietary access to a facility.

Representing the ALS at the meeting were Neville Smith (Deputy Director for Science) and Gary Krebs (User Services Group Leader). Neville and ALS user Steve Kevan (Univ. of Oregon, ALS Scientific Advisory Committee chair) proposed an alternative to the PRT/CAT system called the "approved programs" model. There seemed to be a consensus that this new mode of access, which is currently under consideration at the ALS, would satisfy the needs of the users as well as the BES mandate for facility-operated beamlines. Neville was asked to compose a document that could be used by all the facilities as a guide to the principles of access and the transition process. BES is requiring that each light source develop a plan for centralized scheduling by October 1, 2002.

2. 2002 ALS USERS' MEETING ANNOUNCEMENTS

(Contact: alsum2002@lbl.gov)

The ALS Users' Meeting Program Committee, the Users' Executive Committee (UEC), and the User Services Office announce the 2002 ALS Users' Meeting, to take place October 10 - 12 at Berkeley Lab. This year's meeting will feature a keynote address by Professor Steve Leone of the University of California and newly appointed director of the ALS Chemical Dynamics Group. In addition, there will be meeting sessions devoted to facility updates, highlights from young researchers, and ALS recent research highlights. A student poster competition, a poster session, and six focused workshops will round out this year's program. Register early, by October 1, to receive the early registration rate of $150 (regular) and $60 (student).

All ALS users, postdocs, and students are encouraged to participate by submitting abstracts for presentation at the meeting. Highlight oral presentations will be selected from the submitted abstracts; others will be presented in the poster session. Abstracts must be received by September 13 to be considered for an oral presentation or the student poster competition. Abstracts received by September 27 are guaranteed space in the general poster session and inclusion in the program booklet.

Visit the ALS Users' Meeting Web site at http://www-als.lbl.gov/als/usermtg/ for additional meeting information, including online registration and abstract submission requirements.

3. SUBMIT YOUR RECOMMENDATIONS FOR UEC NOMINEES

The UEC is currently seeking recommendations from ALS users for nominees to be placed on the ballot for this fall's UEC election. Note that these are not direct nominations; a UEC committee will consider these recommendations in drawing up a candidate list. Direct nominations from members of the ALS Users' Association may also be made by petition on an official nomination form. These require the signed endorsement of five Users' Association members and must be mailed or turned in at the upcoming Users' Meeting in October. A simple online form for recommendations as well as a downloadable nomination form (in PDF format) can be found at the UEC election Web site (http://www-als.lbl.gov/als/uec/vote/).

The deadline for submitting recommendations is September 30, and the deadline for submitting signed nomination forms is October 12. The final slate of candidates will be announced on the election Web site on October 17. Voting will take place online from October 17 to November 15, and the results will be posted on November 19. The newly elected UEC members will take office for a three-year term beginning in January 2003 and ending in January 2006.

4. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS. (The ALS has been operating in two-bunch mode since August 6. Normal 1.9-GeV multibunch operation will resume on August 20.)

Beamline 1.4.3
Hoi-Ying Holman (Berkeley Lab)
Felicia Betancourt (Berkeley Lab)
Ted Raab (Carnegie Institute of Washington)

Beamline 4.0.2
Nora Berrah (Western Michigan Univ.)

Beamlines 5.0.1, 5.0.2
Dong Hae Shin, Shengfeng Chen, Jeroen Brandsen (Berkeley Structural Genomics Center)
Mark Knapp, Pete Dunten, Armando Villasenor (Roche Bioscience)
Johnathan Friedman, Latesh Lad, Huiying Li (Univ. of California, Irvine)

Beamline 6.3.1
Dennis Lindle (Univ. of Nevada, Las Vegas)

Beamline 7.0.1
Z.Q. Qiu (Univ. of California, Berkeley)
Ivan Schuller (Univ. of California, San Diego)
Harald Ade (North Carolina State Univ.)

Beamline 7.3.1.1
Simone Anders (IBM Almaden Research Center)
Adam Hitchcock (McMaster Univ., Canada)

Beamline 8.0.1
Dennis Lindle (Univ. of Nevada, Las Vegas)
Yasuji Muramatsu (Japan Atomic Energy Research Institute)

Beamline 9.0.2
Arthur Suits (State Univ. of New York at Stony Brook)

Beamline 9.3.2
Mike Prior (Berkeley Lab)

Beamline 10.0.1
Nora Berrah (Western Michigan Univ.)
Z.X. Shen (Stanford Univ.)
Astrid Mueller (Berkeley Lab)

5. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user run of July 30 - August 4, the beam reliability (time delivered/time scheduled) was 96%. Of the scheduled beam, 84% was delivered to completion without interruption. For the user run of August 6 - 12 (two-bunch mode), the beam reliability was 98%. Of the scheduled beam, 98% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The

Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, ejmoxon@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 206 August 28, 2002

Contents of This Issue:

1. PHOTOIONIZATION OF METASTABLE IONS: FIRST ABSOLUTE MEASUREMENT

by Lori Tamura
(Contact: phaneuf@physics.unr.edu)

Beginning physics students can often check their calculations by turning to the answers given in the backs of their books. Unfortunately, there is no such recourse for checking state-of-the-art theoretical calculations such as those that describe the structure of ions and their interactions with photons. Although these calculations are crucial to our understanding of both astrophysical and laboratory plasmas, experiments that allow the critical testing of theory have only relatively recently become possible with the advent of third-generation synchrotron light sources of exceptional brightness. At the ALS, researchers from the U.S. and Mexico used a newly developed ion-photon-beam endstation to obtain high-resolution measurements of the photoionization cross-section of oxygen ions in metastable (long-lived) excited states. The comparison of the results with two independent theoretical calculations is believed to be the first reported for photoionization from metastable states of ions.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/52meta.html.

Publication about this research: A.M. Covington, A. Aguilar, I.R. Covington, M. Gharaibeh, C.A. Shirley, R.A. Phaneuf, I. Alvarez, C. Cisneros, G. Hinojosa, J.D. Bozek, I. Dominguez, M.M. Sant' Anna, A.S. Schlachter, N. Berrah, S.N. Nahar, B.M. McLaughlin, "Photoionization of Metastable O^+ Ions: Experiment and Theory," Phys. Rev. Lett. 87, 243002 (2001).

2. DIRECTOR PROVIDES UPDATE ON "STATE OF THE ALS"

ALS Director Daniel Chemla talked about current and future plans at an all-hands meeting of ALS personnel on August 14, 2002. He began his review of the "state of the ALS" by announcing in person his decision to step down from the directorship of Berkeley Lab's Materials Sciences Division and to concentrate his efforts on leading the ALS. He has been director of both divisions since 1998. He then went on to provide brief status reports on a number projects currently in the works. Of these, the furthest along is the Molecular Environmental Science (MES) beamline, which saw first light on July 23 and is currently being

commissioned; it is expected to be completed later this year. Daniel also mentioned that the proposed femtosecond slicing source has received tentative approval from the Office of Basic Energy Sciences (BES), with funding forthcoming for a beamline, endstation, and laser. Other important initiatives being pursued for the near future include boosting the ALS's core competency through improvements in ultrahigh-resolution spectroscopy and inelastic scattering, as well as continued efforts toward making the case for a super-radiant far-infrared ring to be built on top of the booster ring.

Daniel also touched upon more general issues facing the ALS, such as centralized beamtime scheduling and transferring the operation of BES beamlines from participating research teams (PRTs) to the ALS. The facility should be able to accommodate such changes, Daniel indicated, as long as the necessary funding is provided. The shortage of office and lab space was also addressed with reference to an earlier plan to replace Building 7 (a 1940s-era building adjacent to the ALS) with a modern two- to three-story structure. With respect to user housing, Daniel reported that Berkeley Lab is exploring the possibility of having a third-party vendor build and operate an on-site user hostel. Such a facility would serve the housing needs of all the Berkeley Lab user facilities, whose combined users number in the thousands. In conclusion, Daniel summarized the ALS mission in terms of producing outstanding science by identifying areas of excellence and articulating a scientific vision, supporting present users by focusing resources, and supporting future users by formulating and implementing a strategic plan.

3. SHIRLEY, HALBACH, AND RENNER AWARD NOMINATIONS OPEN (Contact:alsum2002@lbl.gov)

Each year, the ALS Users' Executive Committee (UEC) presents awards to scientists and staff who have made significant contributions to the ALS scientific and user support programs. This year, the UEC invites ALS users and staff to submit nominations for any or all of the following awards:

* David A. Shirley Award for Outstanding Scientific Achievement at the Advanced Light Source
* Halbach Award for Innovative Instrumentation at the Advanced Light Source
* Tim Renner User Services Award for Outstanding Support to the ALS User Community

The nominations may be for an individual or a group, and a brief rationale for the nomination(s) is required. Past award winners, along with a representative from the UEC and the ALS, will serve on the award selection committees. To submit a nomination, go to the 2002 ALS Users' Meeting Award Nominations Web page at http://www-als.lbl.gov/als/usermtg/awards/nominations.html. The deadline for nominations is Friday, September 30. The awards will be presented at the ALS Users' Meeting dinner/buffet on Thursday, October 10.

This year's ALS Users' Meeting will be held October 10 - 11, 2002, at Berkeley Lab (see http://www-als.lbl.gov/als/usermtg/ for details). All users, including students and postdocs, are encouraged to contribute to the program by submitting abstracts of their work done at the ALS. Abstracts must be submitted by September 13 to be considered for an oral presentation or the student poster competition. Abstracts submitted by September 27 will be guaranteed space in the poster session and inclusion in the program booklet.

4. 7TH SXNS CONFERENCE COMING SOON TO TAHOE

(Contact:JBKortright@lbl.gov)

The 7th International Conference on Surface X-Ray and Neutron Scattering (7SXNS) will be held at Lake Tahoe September 23 - 27, 2002. This conference brings together researchers studying structural aspects of thin films and surfaces of solid, liquid, and soft condensed materials via neutron and x-ray scattering techniques. In addition to emerging experimental and theoretical techniques, papers will report on studies of materials ranging from semiconductor and magnetic nanostructures to protein systems and DNA chips. While hard x rays and neutrons have long been used to probe such structures, soft x rays like those produced at the ALS are of growing interest because they can be tuned to the core levels of many interesting species in magnetic and organic systems whose surface and thin-film properties are interesting and technologically important. Several ALS studies involving magnetic and polymer films will be presented. Conference sponsors include the ALS, Stanford Synchrotron Radiation Laboratory (SSRL), and the Spallation Neutron Source (SNS). Full details can be found at http://sxns.lbl.gov/.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next three weeks at the ALS.

Beamline 1.4.3
Hoi-Ying Holman (Berkeley Lab)
Ted Raab (Carnegie Institution of Washington)
Felicia Betancourt, Bob Glaeser (Berkeley Lab)

Beamline 4.0.2
Dan Waddill (Univ. of Missouri-Rolla)
Jo Stohr (Stanford Synchrotron Radiation Laboratory)
Stephen Cramer (Univ. of California, Davis)

Beamline 7.3.1.1
Z.Q. Qiu (Univ. of California, Berkeley)
Simone Anders (IBM Almaden Research Center)
Gary Mitchell (The Dow Chemical Company)
Rainer Fink (Univ. Erlangen, Germany)
Christian Stamm (Stanford Linear Accelerator Center)

Beamline 8.0.1
Yasuji Muramatsu (Japan Atomic Energy Research Institute)
David Shuh (Berkeley Lab)

Beamline 10.0.1
Alfred Mueller (Univ. Giessen, Germany)

Dan Dessau (Univ. of Colorado at Boulder)
Darrah Thomas (Oregon State Univ.)
James Allen (Univ. of Michigan)

Beamline 10.3.2
Tatiana Kirpichtchikova, Geraldine Sarret, Frederic Panfili (Univ. Joseph Fourier, France)

6. NEXT ISSUE IN THREE WEEKS

ALSNews will take a short Labor Day break. The next issue will be published in three weeks, on September 18. We hope everyone enjoys the rest of the summer, and we'll be back in the fall!

7. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user run of August 14 - 19 (two-bunch mode), the beam reliability (time delivered/time scheduled) was 98%. Of the scheduled beam, 96% was delivered to completion without interruption. For the user run of August 20 - 25 (normal multibunch mode), the beam reliability was 97%. Of the scheduled beam, 76% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

ALSNews Vol. 207 September 18, 2002

Contents of This Issue:

1. ALS USERS' MEETING 2002 UPDATE

(Contact: alsum2002@lbl.gov)

General information, a preliminary program, meeting deadlines, and online registration for this year's ALS Users' Meeting, to be held at Berkeley Lab October 10 - 12, is available at the Users' Meeting Web site at http://www-als.lbl.gov/als/usermtg/. Register by October 1 to avoid late registration fees. Information about accommodations available to meeting participants in local hotels is available at http://www-als.lbl.gov/als/usermtg/accommodation.html.

Abstract Submission

The abstract submission deadline for poster presentations at the ALS Users' Meeting is Friday, September 27. See instructions for online submission at http://www-als.lbl.gov/als/usermtg/abstracts.html.

Workshops

This year, six focused workshops will follow the end of the formal Users' Meeting program on Friday, October 11, and Saturday, October 12. The workshop topics are as follows:

Application of X-Ray Microdiffraction to Materials and Environmental Science
Applications of Synchrotron Infrared Spectromicroscopy
From Atoms to Aerosols: Opportunities for Chemical Physics at the ALS
Scientific Opportunities in Polarization-Dependent X-Ray Spectroscopy and Microscopy
Scientific Opportunities Using the Proposed meV Beamline at the ALS
Soft-X-Ray Research Opportunities Using Beamline 9.3.1: Sulfur K-Edge EXAFS and Other Topics in Atomic, Molecular, and Materials Sciences

Interested participants are encouraged to contact the workshop leaders (listed at http://www-als.lbl.gov/als/usermtg/workshops.html) for more detailed information about workshop agendas and speakers.

Award Nominations

The deadline for submitting nominations for the Halbach, Shirley, and Renner awards is Monday, September 30. An online nomination form can be found at http://www-als.lbl.gov/als/usermtg/awards/nominations.html. The awards will be presented at the ALS Users' Meeting dinner on Thursday, October 10.

2. UEC ELECTION: ONLINE RECOMMENDATIONS DUE SEPTEMBER 30

Recommendations for nominees to run in this year's Users' Executive Committee (UEC) election are being accepted online through September 30 at http://www-als.lbl.gov/als/uec/vote/. Note that these are not direct nominations; a UEC committee will consider these recommendations in drawing up a candidate list. Direct nominations from members of the ALS Users' Association may also be made by petition on an official nomination form, available for download (in PDF) at the above Web site. These require the signed endorsement of five Users' Association members and must be mailed or turned in at the upcoming Users' Meeting in October.

3. ALS TO PARTICIPATE IN BERKELEY LAB OPEN HOUSE ON OCTOBER 5

(Contact:EJMoxon@lbl.gov)

On Saturday, October 5, the ALS will again open its doors to the public as part of Berkeley Lab's Open House. This year the ALS will feature tours around the ring with stops at beamlines, as well as a walk under the facility's historic dome. On the patio, ALS and Physical Biosciences Division (PBD) staff members will be presenting several hands-on activities, including protein crystal growing, pipetting, solar power demonstrations and more, while inside, Steve Irick of the Experimental Systems Group will return with his popular "Visible Monochromator" activity. In addition, a series of half-hour talks by scientists and engineers will give visitors an overview of the diverse technical and scientific expertise required to run a successful research facility. Speakers and their topics include Carolyn Larabell of Life Sciences Division discussing her research with the x-ray microscope, retired ALS engineer Art Ritchie providing a unique overview of the building of the ALS, accelerator secrets from Christoph Steier of the Accelerator Physics Group, and PBD's James Holton talking about using the ALS to image proteins atom by atom.

In addition to the ALS, many other Berkeley Lab divisions are planning a busy day of activities and tours. Visitors can go behind the scenes and take a look at the 88-Inch Cyclotron (whose "gammasphere" detector was morphed into part of the ALS in the upcoming movie, "The Hulk"), view collections of exhibits from physics and nuclear science, or watch the action at a "robot corral" put together by the Engineering Division. Highlight lectures and talks, a family science tent, and a career fair are also included in the day's activities. More information about the Open House is available at http://www.lbl.gov/OpenHouse/.

4. 2001 ACTIVITY REPORT NOW AVAILABLE

(Contact: alsuser@lbl.gov)

Copies of the 2001 ALS Activity Report have arrived and are now being distributed to members of the ALS community. The report includes feature articles on two big news stories from 2001: the ALS contribution to the success of EUV lithography as the technology of choice for printing future generations of computer chips and the groundbreaking incorporation of three superbend magnets into the storage ring. In the science highlights section, accelerator physics has been added to the usual array of research categories, acknowledging the important scientific contributions made by ALS accelerator physicists. The facility section describes the progress made in the past year on numerous projects such as the Molecular Environmental Sciences beamline and PEEM3, as well as groundwork done on possible future projects such as a coherent far-infrared light source. The special events section chronicles a wide variety of ALS happenings, from the dedication of the AXSUN beamline to tours of the facility by award-winning student inventors. A CD containing a compendium of user abstracts is included inside the back cover.

If you do not receive a copy of the Activity Report within the next few weeks and would like to request one, send email to alsuser@lbl.gov with the words "Send Activity Report" in the subject line. Include your name and complete postal address in the body of the message. Copies will also be available at this year's Users' Meeting (see item 1 above).

5. RECENT PUBLICATIONS: EPAC '02

Listed below are ALS-related papers that have recently been published in the Proceedings of the 8th European Particle Accelerator Conference (EPAC '02), held June 3 - 7, 2002, in Paris, France. The proceedings can be found online at http://accelconf.web.cern.ch/AccelConf/e02/.

Barry, W.C., K.M. Baptiste, R.J. Benjegerdes, A.K. Biocca, J.M. Byrd, W.E. Byrne, D. Cambie, M.J. Chin, J.P. Harkins, J.Y. Jung, S. Kwiatkowski, D. Li, S. Marks, M.C. Martin, W.R. McKinney, D.V. Munson, H. Nishimura, J.A. Paterson, D.W. Plate, K.R. Rex, D.S. Robin, S.L. Rossi, F. Sannibale, T. Scarvie, R.D. Schlueter, G.D. Stover, W.G. Thur, C. Steier, J.P. Zbasnik, "A dedicated storage ring for far-IR coherent synchrotron radiation at the ALS."

Byrd, J.M., W.C. Barry, H. Gang, G.D. Stover, "Beam transfer function diagnostics for broadband multibunch feedback systems."

Byrd, J.M., A. Loftsdottir, W. Leemans, B. Marcelis, M. Martin, W. McKinney, F. Sannibale, T. Scarvie, C. Steier, "Broadband self-amplified spontaneous coherent synchrotron radiation in a storage ring."

Corlett, J.N., W. Barry, J.M. Byrd, R. Schoenlein, A. Zholents, "Synchronization of x-ray pulses to the pump laser in an ultrafast x-ray facility."

Corlett, J.N., W. Barry, J.M. Byrd, S. DeSantis, P. Heimann, S. Lidia, D. Li, R. Rimmer, K. Robinson, R. Schoenlein, J. Tananbe, S. Wang, W. Wan, R. Wells, A. Zholents, M. Placidi, W. Pirkl, "A recirculating linac-based synchrotron light source for ultrafast x-ray science."

Li, D., and J.N. Corlett, "RF delecting cavity design for Berkeley ultrafast x-ray source."

Robin, D., R. Benjegerdes, A. Biocca, P. Bish, W. Brown, W. Byrne, D. Calais, M. Chin, C. Corradi, D. Coulomb, J. De Vries, R. DeMarco, M. Fahmie, A. Geyer, J. Harkins, T. Henderson, J. Hinkson, E. Hoyer, D. Hull, S. Jacobson, J. Krupnik, S. Marks, J. McDonald, P. Molinari, R. Mueller, L. Nadolski, K. Nishimura, F. Ottens, J.A. Paterson, P. Pipersky, A. Ritchie, S. Rossi, B. Salvant, R. Schlueter, A. Schwartz, J. Spring, C. Steier, C. Taylor, W. Thur, C. Timossi, A. Wandesforde, J. Zbasnik, J. Chen, B. Wang, W. Decking, "Successful completion of the ALS superbend project."

Steier, C., A. Biocca, E. Domning, S. Jacobson, L. Nadolski, G. Portmann, T. Scarvie, E. Williams, "Orbit feedback development at the ALS."

Steier, C., T. Byrne, L. Nadolski, D. Robin, B. Salvant, T. Scarvie, W. Decking, "Commissioning of the ALS with superbends."

6. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Felicia Betancourt, Bob Glaeser (Berkeley Lab)
Maria Isaac (OptiScan Biomedical)
Ted Raab (Carnegie Institution of Washington)
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Chuck Fadley (Univ. of California, Davis, and Berkeley Lab)
Stephen Cramer (Univ. of California, Davis)

Beamline 7.0.1
Elaine Seddon (Daresbury Laboratory, UK)
Harald Ade (North Carolina State Univ.)
Brian Tonner (Univ. of Central Florida)
James Allen (Univ. of Michigan)
Joseph Nordgren (Uppsala Univ., Sweden)

Beamline 8.0.1
Kevin Prince (Sincrotrone Trieste, Italy)
Manfred Neumann (Univ. of Osnabrueck, Germany)
Anders Nilsson (Stanford Synchrotron Radiation Laboratory)

Beamlines 8.2.1, 8.2.2
John Kuriyan (Univ. of California, Berkeley, and Berkeley Lab)
Tara Davis, Tung-Chung Mou, Charles Dann (Univ. of Texas Southwestern Medical Center)
Joseph Mougous (Univ. of California, Berkeley)
Steve Edwards, Feng Guo (Univ. of Colorado at Boulder)

Beamline 10.0.1
Z.X. Shen (Stanford Univ.)
Ron Phaneuf (Univ. of Nevada, Reno)

Beamline 10.3.2
Alain Manceau (Berkeley Lab)
Donald Sparks, Gerald Hendricks (Univ. of Delaware)

7. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of August 27 - September 1, September 4 - 9, and September 11 - 16, the beam reliability (time delivered/time scheduled) was 97%. Of the scheduled beam, 87% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/accelinfo.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov, ejmoxon@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 208 October 2, 2002

Contents of This Issue:

1. ALS USERS' MEETING 2002 UPDATE

(Contact: alsum2002@lbl.gov)

Registration Still Open

If you have not yet signed up for the 2002 ALS Users' Meeting, to be held at Berkely Lab next week, you can still register online by going to http://www-als.lbl.gov/als/usermtg/registration.html. Attendees are strongly encouraged to register as early as possible to avoid security delays upon entrance to the Lab, help organizers arrange for workshop space, and ensure adequate supplies of meeting materials and meals.

Speaker Schedule Finalized

The speakers for the Users' Meeting have been selected. On Thursday, six young researchers will present the results of their work at the ALS. Friday will feature keynote speaker Steve Leone followed by the presentation of five scientific highlights from the past year. An updated schedule has been posted at http://www-als.lbl.gov/als/usermtg/program.html. All submitted abstracts that were not selected for oral presentation will be included in the poster session on Thursday afternoon.

Workshop Info Available

The workshops page at http://www-als.lbl.gov/als/usermtg/workshops.html has been updated to include workshop descriptions, speaker lists, and schedules where available.

2. RIXS TECHNIQUE MEASURES HUBBARD INTERACTION

by Art Robinson
(Contact: tcallcott@utk.edu)

The Hubbard interaction term U is a measure of the strength of the repulsion between electrons in certain solids, but direct measurements of its value have been difficult. Now, scientists from the University of Tennessee, Knoxville, and the Oak Ridge National Laboratory have used the

technique of resonant inelastic x-ray scattering (RIXS) at the Advanced Light Source to make a particularly clean measurement of the Hubbard U in sodium vanadate (NaV[2]O[3]). They were also able to calculate a value for U in this material, so their measurement makes possible a direct comparison between theory and experiment. In this case, theory and experiment turn out to be in good agreement, thereby suggesting that RIXS provides useful information for solids with strong electron-electron interactions.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/57rixs.html.

Publication about this research: G.P. Zhang, T.A. Callcott, G.T. Woods, L. Lin, B. Sales, D. Mandrus, J. He, "Electron Correlation Effects in Resonant Inelastic X-Ray Scattering of NaV[2]O[3]," Phys. Rev. Lett. 88, 077401 (2002).

3. SHINING INFRARED LIGHT ON A CRIME SCENE

by Lynn Yarris
(Contact: DLPerry@lbl.gov)

With infrared light, forensic investigators can tell you whether a document is a forgery or paper currency is counterfeit. They can take a paint chip and tell you the make, model and age of a car. Now the boundaries of infrared forensics are being pushed into uncharted territories by researchers at Berkeley Lab, and the results are promising for criminal and antiterrorism investigations as well as for historians and archaeologists.

The Advanced Light Source (ALS), while best known for its x-ray and ultraviolet light, can generate intense beams of photons in the infrared (IR) spectrum. Working at the ALS, Berkeley Lab researchers have applied IR spectromicroscopy in a proof-of-principle study to characterize a variety of inks on paper with unprecedented sensitivity. They have also used these IR beams to obtain chemical "sweatprints" that may be every bit as unique and ubiquitous as a physical fingerprint.

To read the full article, published in the Berkeley Lab newspaper, "Currents," go to http://www.lbl.gov/Publications/Currents/archive/#Shining.

4. UEC ELECTION: CURRENT EMAIL ADDRESS REQUIRED

(Contact: alsuser@lbl.gov)

To vote in the upcoming Users' Executive Committee (UEC) election, you must have a current email address on file with the User Services Office. The email addresses in our user database will be used to validate votes in the upcoming UEC election, to be conducted online from October 17 to November 15, 2002. If your email address has changed in the last year and you have not yet notified us, send your new address via email to alsuser@lbl.gov by October 16, 2002. For more information on the voting process, go to http://www-als.lbl.gov/als/uec/vote/.

5. NEW ALS WEB LOOK UNVEILED

(Contact: AMGreiner@lbl.gov)

Check out the updated ALS Web site at http://www-als.lbl.gov/. It has a fresh new look with added features such as drop-down menus on the home page that take you directly to where you want to go. The redesign incorporates a wider, more open format that allows for a full complement of primary links across the top of each page as well as a column of secondary links down the left. While most of the site's structure has not changed, a few pages have moved. Bookmarks for the following pages may need to be updated:

Operating schedule
http://www-als.lbl.gov/als/schedules/index.html
Weekly schedule
http://www-als.lbl.gov/als/schedules/weekly.html
Technical specifications
http://www-als.lbl.gov/als/techspecs/index.html
Storage ring parameters
http://www-als.lbl.gov/als/techspecs/srparameters.html
Photon source parameters
http://www-als.lbl.gov/als/techspecs/insertdev.html
Individual beamline tables
http://www-als.lbl.gov/als/techspecs/bl#.#.#.html
Links to user sites
http://www-als.lbl.gov/als/usersites.html

6. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Simon Clark (Berkeley Lab)

Beamline 4.0.2
Stephen Cramer (Univ. of California, Davis)
Dan Waddill (Univ. of Missouri-Rolla)
Boris Sinkovic (Univ. of Connecticut)

Beamlines 5.0.1, 5.0.2, 5.0.3
Steve Bellon (Vertex Pharmaceuticals)
Julie Lougheed, Paul Foster, Tom Stout, Jeff Till (Exelixis, Inc.; Univ. of California, San Francisco)
Zhangbao Xu, Weixin Xu (Wyeth-Ayerst Research)
Mark Knapp, Armando Villasenor, Gisele Tavares (Roche Bioscience)
Nam-Chul Ha, Bill Weiss (Stanford Univ.)
Ed Berry, Li-Shar Huang (Berkeley Lab)
Gyorgy Snell (Syrrx, Inc.)

Beamline 7.0.1

James Allen (Univ. of Michigan)
Joerg Schaefer (Univ. Augsburg, Germany)
Joseph Nordgren (Uppsala Univ., Sweden)

Beamline 7.3.1.1
Z.Q. Qiu (Univ. of California, Berkeley)
Shirley Chiang (Univ. of California, Davis)

Beamline 7.3.3
Teresa Head-Gordon (Berkeley Lab)

Beamline 8.0.1
Anders Nilsson (Stanford Synchrotron Radiation Laboratory)

Beamline 8.2.2
Marjeta Podobnik, Steve Kazmirski (Univ. of California, Berkeley)
Seth Harris, Kevin Slep (Univ. of California, San Francisco)

Beamline 8.3.1
Kaoru Yoshida, Wa-On Yu (Univ. of California, Berkeley)
Sibyl Baladi, Ho-Leung Ng, Jim Endrizzi (Univ. of California, Berkeley)

Beamline 9.3.2
Glenn Waychunas (Berkeley Lab)

Beamline 10.0.1
Nora Berah (Western Michigan Univ.)
Dan Dessau (Univ. of Colorado at Boulder)
Z.X. Shen (Stanford Univ.)

Beamline 10.3.2
Alain Manceau (Berkeley Lab)
Andy Smith (Daresbury Laboratory, UK)

7. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of September 17 - 22 and 24 - 30, the beam reliability (time delivered/time scheduled) was 97%. Of the scheduled beam, 73% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 209 October 16, 2002

Contents of This Issue:

1. 2002 USERS' MEETING HIGHLIGHTS

by Lori Tamura
(Contact: rwf@physics.berkeley.edu)

Over 350 participants gathered at Berkeley Lab last week for the 2002 ALS Users' Meeting. Evolving modes of user access were a hot topic this year, being addressed in several talks by ALS and DOE officials as well as in a town-hall question-and-answer period during the meeting's opening sessions. The agenda also included updates on the state of the ALS, the announcement of awards, the presentation of research highlights (see http://www-als.lbl.gov/als/usermtg/program.html), and a wide-ranging series of workshops exploring opportunities for future development at the ALS (see http://www-als.lbl.gov/als/usermtg/workshops.html).

In his opening remarks, Berkeley Lab Director Charles Shank announced that Steve Kevan (Univ. of Oregon) will soon be stepping down as chair of the ALS Scientific Advisory Committee (SAC). He thanked Steve for his valuable leadership of this important committee and invited users to provide input to ALS Deputy Director for Science Neville Smith on filling the vacancy left by Steve's departure. Director Shank also mentioned that Berkeley Lab is looking into opportunities for building an on-site user housing facility and encouraged users to communicate their housing needs to the Users' Executive Committee (UEC).

Pat Dehmer, representing the Department of Energy's Office of Basic Energy Sciences (BES), focused on clarifying the context surrounding recently proposed changes to modes of user access. She emphasized that this development is best characterized as a step in the continuous evolution of ways to provide access to user facilities so as to maximize scientific output. Furthermore, such change can only happen with the cooperation and input of light source directors, user communities, and funding agencies. Neville Smith also spoke at length about the history of participating research teams (PRTs) and how the ALS is evolving towards an approved program (AP) model. Details about the AP model and other user-access issues were the main focus of discussion during the town-hall meeting part of the program.

ALS Director Daniel Chemla reviewed the state of the ALS, recapping a busy, productive year and providing status reports on current projects, including the recently approved femtosecond slicing source beamline. Other current projects include the molecular environmental science

(MES) beamline (being commissioned) and the PEEM3 microscope (under construction, expected completion in 2004). Future projects with high priority include ultrahigh-resolution spectroscopy, coherent soft x-ray scattering, a super-radiant coherent infrared ring, and a superbend beamline for high-pressure research. In addition, Accelerator Physics Group Leader David Robin reported that, a year after installation, the superbends are very reliable, exceeding expectations. The transition was seamless and there has been no significant effect on nonsuperbend users of the ALS.

Awards for 2002 were presented during a reception and buffet dinner held on the ALS patio on Thursday evening. Ximei Qian (Univ. of California, Davis) won the student poster competition with her submission titled "State-Selected Ion-Molecule Reaction Dynamics at Extremely High Vibrationally Excited States." The Renner User Services Award was split between Charles A. Knopf (Mechanical Engineering Group, retired) "for his years of dependable, cheerful work in fitting water connections and in enhancing the user-friendly atmosphere at the ALS" and Gerry McDermott (Berkeley Center for Structural Biology) "for consistently going out of his way to help users and make them feel at home."

This year's Halbach Award for Innovative Instrumentation went to Harald Ade (North Carolina State Univ.), Peter Hitchcock (McMaster Univ., Canada), David Kilcoyne (North Carolina State Univ.), Tolek Tyliszczak (Berkeley Lab), Tony Warwick (ALS), and the STXM Team "for design and implementation of advanced interferometrically controlled scanning transmission x-ray microscopes." In accepting the award on behalf of the team, Harald praised all who had contributed. The Shirley Award for Outstanding Scientific Achievement was presented jointly to Nora Berrah (Western Michigan Univ.), John Bozek (ALS), Carmen Cisneros (Univ. Nacional Autonoma de Mexico), Aaron Covington (Lake Tahoe Community College), and Ron Phaneuf (Univ. of Nevada, Reno) "for groundbreaking advances in atomic and molecular physics, including studies of photon-ion beams." The recipients are delighted to acknowledge their many collaborators and express special gratitude to their students.

2. FIRST CALL: GENERAL SCIENCES PROPOSALS DUE DECEMBER 1

(Contact: alsproposals@lbl.gov)

The User Services Office is now accepting general user (formerly independent investigator) proposals from scientists who wish to conduct research in the general sciences at the ALS during the running period from June to December 2003. The deadline for submissions is December 1, 2002. (This deadline does not apply to protein crystallography proposals, which have a separate process and schedule.) The change in terminology from independent investigator to general user was agreed upon by the various light sources to be consistent with each other.

Scientists wishing to renew a previous proposal must fill in a one-page Experiment Report/Beamtime Request and submit it to the User Services Office by the December 1 deadline. The numeric rating for each proposal will be communicated to the user along with comments from the Proposal Study Panel, where appropriate. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

ALS User Services Administrator

alsuser@lbl.gov

General user proposal process
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

3. UEC ELECTION BEGINS TOMORROW ONLINE
(Contact: AMGreiner@lbl.gov)

Online voting for three new Users' Executive Committee (UEC) members will take place starting tomorrow, October 17, and continuing through November 15, 2002. Check the UEC Elections Web site at http://www-als.lbl.gov/als/uec/vote/ to view the final slate of candidates and their bios. All ALS users with current email addresses on file in our user database are eligible to vote. The election results will be posted at the above site on November 19, 2002. The newly elected members will take office for a three-year term beginning January 1, 2003, replacing those rotating off the committee at the end of this year: Roger Falcone (Univ. of California, Berkeley), Harald Ade (North Carolina State Univ.), and Carolyn Larabell (Berkeley Lab).

4. TREMENDOUS TURNOUT FOR OPEN HOUSE
(Contact: EJMoxon@lbl.gov)

At Berkeley Lab's Open House event on Saturday, October 5, tours of the ALS were the "hottest ticket in town," according to visitors who spent up to half an hour waiting patiently in line to get inside the ALS. The crowds started arriving promptly as the Lab opened its gates at 10:00 a.m., and traffic remained steady well past the 4:00 p.m. closing time. A volunteer army of knowledgeable ALS staff served as tour guides, escorting groups around the experiment floor, into the control room, up over the storage ring, and under the ALS's signature dome. Users with beamtime seemed to take the zoo-like atmosphere in stride, posting humorous "Do Not Feed the Scientist" signs around work areas.

Out on the patio, the perennially popular demonstrations involving liquid nitrogen (an ALS staple) were updated to include ice-cream-making, ensuring a steady throng of taste-testers around the booth throughout the unusually hot day. Also popular was a crystal-growing demonstration sponsored by the Physical Biosciences Division (PBD), where kids could grow their own sugar-crystal lollipops. Those craving more substantial fare could choose from a menu of talks--on ALS science by Berkeley-based users Carolyn Larabell and James Holton and on ALS technology by accelerator physicist Christoph Steier and retired engineer Art Ritchie. With an overall attendance of 7000+, this Open House was by all accounts a huge success. Sincere thanks to all those who volunteered their time and effort, and hearty congratulations to the event's ALS/PBD coordinators, Liz Moxon, Art Robinson, Jane Tanamachi, and Ellen Ford.

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Simon Clark (Berkeley Lab)
Rajeshwari Ganguli, Carol Litchfield (George Mason Univ.)

Beamline 7.0.1
Karsten Horn (Fritz-Haber-Institute, Germany)
Ivan Schuller (Univ. of California, San Diego)
Laurent Duda (Uppsala Univ., Sweden)

Beamline 7.3.1.1
Simone Anders (IBM Almaden Research Center)
Stephen Urquhart (Univ. of Saskatchewan, Canada)
Adam Hitchcock (McMaster Univ., Canada)

Beamline 8.0.1
Eberhard Umbach (Univ. Wurzburg, Germany)
Alexander Moewes (Univ. of Saskatchewan, Canada)

Beamline 8.2.2
Ed Berry (Berkeley Lab)
Geoffrey Chang, Christopher Roth, Alex Ma (The Scripps Research Institute)

Beamline 8.2.1
Karthikeyan Subramanian, Sangita Sinha (Univ. of Texas Southwestern Medical Center)
Steve Edwards (Univ. of Colorado at Boulder)

Beamline 8.3.1
Peter Hwang (Univ. of California, San Francisco)
Emmanuel Skordalakes, Paul Pease, Eric Abbate, Wa-On Yu (Univ. of California, Berkeley)

Beamline 10.0.1
Z.X. Shen (Stanford Univ.)
Ron Phaneuf (Univ. of Nevada, Reno)
Erwin Poliakoff (Louisiana State Univ.)
James Allen (Univ. of Michigan)

Beamline 10.3.2
Donald Sparks, Gerald Hendricks (Univ. of Delaware)
Satish Myneni (Princeton Univ.)

6. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user run of October 1 - 7, the beam reliability (time delivered/time scheduled) was 98%. Of the scheduled beam, 93% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 210 October 30, 2002

Contents of This Issue:

1. AQUAPORIN STRUCTURE ELUCIDATES WATER TRANSPORT

by Annette Greiner
(Contact: bkjap@lbl.gov)

From aqueducts to osmosis, water transport is crucial to life. Yet, precisely how life manages the transport of water across membranes has remained a mystery for eons--until now. A team of researchers from the Berkeley Lab Life Sciences Division has solved the structure of aquaporin-1 (AQP1), a membrane protein that controls the movement of water molecules into and out of mammalian cells. It is a member of the aquaporin superfamily, whose members transport water or water and glycerol or urea. The new structure offers a resolution of 2.2 angstroms, allowing researchers to deduce just how the protein does its job.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/54aquaporin.html.

Publication about this research: H. Sui, B.-G. Han, J.K. Lee, P. Walian, and B.K. Jap, "Structural basis of water-specific transport through the AQP1 water channel," Nature 414, 878 (2001).

2. YVES PETROFF WRAPS UP ALS ADVISORY ROLE

(Contact: NVSmith@lbl.gov)

After 19 months at the ALS, Yves Petroff's tenure as special advisor to Director Daniel Chemla has come to a successful conclusion marked by a farewell reception in which Chemla credited Petroff for stimulating numerous changes that have boosted the facility's efficiency and productivity. With his international reputation for leadership in synchrotron radiation-related research and his years of experience as director of the highly successful European Synchrotron Radiation Facility, Petroff had been called in to provide advice and counsel in the formulation and implementation of science policy, long-term strategic planning, and interactions with the scientific community. At the ALS, he played a key role both in assessing strengths and weaknesses of the overall ALS scientific portfolio and in using that information to catalyze new successful programs. Petroff also reviewed ALS management's approach to providing scientific support to users, including the efforts of the User Services, Experimental Systems, and Scientific Support Groups.

3. BRIEF SHUTDOWN PLANNED FOR NOVEMBER
(Contact: SLRossi@lbl.gov)

The ALS will shut down for two weeks next month, beginning on Monday, November 4. Major tasks scheduled for this shutdown include preparations for expansion in Sector 12, where modifications will be made to the shield wall and electrical panels to accommodate the growth of superbend beamlines in the sector. Beamlines 12.2.2 (high-pressure diffraction) and 12.3.1 (protein crystallography) are already under construction. Other major tasks include the removal of two third-harmonic cavities from the storage ring to improve longitudinal beam stability at 1.9-GeV operation and the replacement of carbon filters, used for protein crystallography applications, in the Sector 5 beamlines.

The Sector 12 electrical panel work will cause a few minor inconveniences due to the associated electrical interruptions. Normal lighting in Sectors 11 through 4 will be shut off November 4 - 5 and there will be brief (~15-minute) interruptions to network availability on November 5 (at 6 a.m.) and November 8 (at 6 p.m.). The ventilation system will also be shut down November 6 - 8. An emergency generator will be brought in to help minimize power interruptions; it will be located in the driveway outside the roll-up door near Sector 12 (the "B door"). Any questions or issues arising from these circumstances can be directed to Steve Rossi (SLRossi@lbl.gov).

The installation and maintenance tasks are scheduled to be completed on Saturday, November 9, to be followed by a quick start-up effort and several days of special operations shifts, with light returning to users on Friday, November 15. We anticipate another smooth and safe shutdown.

4. STAFFING CHANGE IN USER SERVICES
(Contact: GFKrebs@lbl.gov)

The ALS User Program, administered through the User Services Group, will soon be under new management. Current User Program Administrator Jeremy Coyne will transition into the role of Resource Analyst in the Budget Section of the ALS Planning Group, starting November 1. Stepping in will be Jeffrey Troutman, who most recently served as Executive Administrator to the head of Berkeley Lab's Administrative Services Department. Jeff has also worked for the Joint Genome Institute and SEMI, a semiconductor industry trade association, organizing conferences and educational programs. He has a BA from the University of Arizona and is working on an MBA at California State University, Hayward. Congratulations to Jeremy, and welcome to Jeff!

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next week at the ALS.

Beamline 1.4.3
Felicia Betancourt (Berkeley Lab)
Hoi-Ying Holman (Berkeley Lab)

Beamline 4.0.2
Jeff Kortright (Berkeley Lab)

Beamline 7.0.1
Steve Kevan (Univ. of Oregon)
Elaine Seddon (Daresbury Laboratory, UK)

Beamline 7.3.1.1
Mikhail Zharnikov (Univ. Heidelberg, Germany)

Beamline 8.0.1
Satish Myneni (Princeton Univ.)

Beamline 9.3.1
James Cotter (Univ. of Nevada, Reno)

Beamline 10.0.1
James Allen (Univ. of Michigan)
Erwin Poliakoff (Louisiana State Univ.)

Beamline 10.3.2
Donald Sparks, Gerald Hendricks (Univ. of Delaware)

6. OPERATIONS UPDATE

(Contact: Lampo@lbl.gov)

For the user runs of October 9 - 14, 15 - 20, and 22 - 28, the beam reliability (time delivered/time scheduled) was 93%. Of the scheduled beam, 86% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 211 November 13, 2002

Contents of This Issue:

1. PROGRESS REPORT ON SESAME PROJECT IN JORDAN

(Contact: ZHussain@lbl.gov)

Accompanied by Herman Winick (Stanford Synchrotron Radiation Laboratory), Dieter Einfeld, Technical Director of SESAME (Synchrotron light for Experimental Science and Applications in the Middle East), stopped by the ALS recently to update users and staff on the status of this trailblazing project. Developed under the auspices of the United Nations Educational, Scientific, and Cultural Organization (UNESCO), SESAME will be a major international research center in the Middle East/Mediterranean region. It will be located on the campus of Al Balqa University in Allaan, Jordan. The SESAME site is 30 km northwest of the Jordanian capital, Amman, but significantly also only a 2- to 3-hour drive from Jerusalem.

When originally proposed in 1997 by Gus Voss (Deutches Elektronen-Synchrotron, DESY) and Winick, SESAME was to use hardware from the synchrotron light source BESSY I, which was scheduled for decommissioning as soon as the third-generation BESSY II was up and running in Berlin. Use of BESSY I hardware would help make the project practical for a region without a large scientific infrastructure and with limited resources. BESSY I was crated and shipped to Jordan from Berlin last summer. However, with an 800-MeV storage ring, the old machine was not compatible with most of the scientific applications foreseen for the facility, which required hard x rays with photon energies up to 20 keV. After a series of redesigns, SESAME is now envisioned to be a 2-GeV, third-generation light source with an emittance of 17 nm-rad and 13 of its 16 straight sections available for the installation of insertion devices with a length of around 3 m. The circumference of the machine will be 120 m. The 800-MeV booster synchrotron of BESSY I will still be used with small changes. A new building to house SESAME will provide the space for offices, workshops, laboratories, and beamlines with lengths up to 30 m.

Governing SESAME at present is a 13-country Interim Council chaired by Herwig Schopper, former Director-General of CERN. A Permanent Council is being formed of countries that notify UNESCO that they accept the SESAME statutes, the most important element of which is a collective commitment to provide the annual operating expenses. There are also several observer states (including the United States) from elsewhere in the region and around the world. The European Union may fund part of the construction of the machine and beamlines. Funds or in-

kind contributions are also being sought from the U.S., Japan, and other countries. In anticipation of progress toward identifying funds for initial accelerator and beamline capital costs, groundbreaking for the new building is scheduled for January 6, 2003, with the King of Jordan and Koichiro Matsuura, Director-General of UNESCO, in attendance. SESAME could be producing its first light for beamlines in 2007, a schedule that clearly depends on the achievement of political stability in the region. In the meantime, a large number of trainee scientists are scattered around the world's synchrotron light sources learning the skills of the trade.

2. REMINDER: GENERAL SCIENCES PROPOSALS DUE DECEMBER 1

(Contact: alsproposals@lbl.gov)

The User Services Office is accepting general user proposals (formerly "independent investigator" proposals) from scientists who wish to conduct research in the general sciences at the ALS during the running period from June to December 2003. The deadline for submissions is December 1, 2002. (This deadline does not apply to protein crystallography proposals, which have a separate process and schedule; see link for "Proposal process" below.)

Scientists wishing to renew a previous proposal must fill in a one-page Experiment Report/Beamtime Request (an RTF form is available for download at http://www-als.lbl.gov/als/quickguide/expt_report.rtf) and submit it to the User Services Office by the December 1 deadline. The numeric rating for each proposal will be communicated to the user along with any comments offered by the Proposal Study Panel. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

Submitting a general science proposal for beam time
http://alsusweb.lbl.gov/

Becoming an ALS User
http://www-als.lbl.gov/als/quickguide/becomealsuser.html

Proposal process (general science and protein crystallography)
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

ALS User Services Administrator
alsuser@lbl.gov

3. PROCESSING DELAYS POSSIBLE FOR NONIMMIGRANT VISAS

(Contact: BOrtega@lbl.gov)

On September 11, 2002, the U.S. State Department announced the implementation of stricter screening measures for foreign nationals applying for nonimmigrant visas at U.S. consulates. A nonimmigrant visa is issued to those with permanent residence outside the U.S. but who wish to be in the U.S. temporarily for purposes such as tourism, medical treatment, business, temporary work, or study. The latest information from the State Department indicates that the new screening measures, which include security background checks that may be requested at the discretion of consular officials, can take up to three months to complete. Unfortunately, these lengthy processing delays have already resulted in canceled beam time for a few users. To avoid this in the future, affected users are strongly encouraged to apply for visas as early as possible--as soon as they are notified of receiving beam time--and to coordinate the scheduling of their beam time with the ALS User Services Office (510-486-7745, alsuser@lbl.gov). For more information about the visa application process and policies with respect to Berkeley Lab, contact Ben Ortega of the Lab's International Researchers and Scholars Office (510-486-6326, BOrtega@lbl.gov).

Related links:

ALS User Guide: Documents for Foreign Nationals
http://www-als.lbl.gov/als/quickguide/foreigndoc.html

Berkeley Lab International Researchers and Scholars Office
http://www.lbl.gov/Workplace/HumanResources/irss/

4. UEC VOTING TO CONCLUDE FRIDAY

(Contact: AMGreiner@lbl.gov)

Only two more days remain to vote for the candidates of your choice to fill three open seats on the ALS Users' Executive Committee (UEC). To cast your vote, go to the UEC Elections Web site at http://www-als.lbl.gov/als/uec/vote/ by midnight, PST, Friday, November 15, 2002. Voting online is easy and should take only a few minutes; all that's required is your name, ALS guest number (or Berkeley Lab ID number), and your current email address as reported to the ALS User Services Office.

The election results will be posted at the above site on November 19, 2002. The newly elected members will take office for a three-year term beginning January 1, 2003, replacing those rotating off the committee at the end of this year: Roger Falcone (Univ. of California, Berkeley), Harald Ade (North Carolina State Univ.), and Carolyn Larabell (Berkeley Lab).

5. PHOTOS OF USERS' MEETING NOW ONLINE

(Contact: EJMoxon@lbl.gov)

For those who were unable to attend (or who want to re-live the magic), photos of the ALS Users' Meeting are now posted on the Web at http://www-als.lbl.gov/als/usermtg/.

6. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Hoi-Ying Holman (Berkeley Lab)
Liane Benning (Univ. of Leeds, UK)

Beamline 4.0.2
Boris Sinkovic (Univ. of Connecticut)
Sergei Butorin (Uppsala Univ., Sweden)

Beamline 7.0.1
Steve Kevan (Univ. of Oregon)
Marjorie Olmstead (Univ. of Washington)

Beamline 8.0.1
Alexander Moewes (Univ. of Saskatchewan, Canada)

Beamline 8.2.1
Marty Boulanger, Xiao-Lin He (Stanford Univ.)
Ezequiel Panepucci (Stanford Univ.)

Beamline 8.2.2
Xioping Dai, Xueyong Zhu, Yu An (The Scripps Research Institute)
Andrew Carmel, Blaine Mooers (University of Oregon)

Beamline 9.3.1
Karen McFarlane (Northern Arizona Univ.)
Lan Dang (Univ. of Nevada, Las Vegas)

Beamline 10.0.1
Z.X. Shen (Stanford Univ.)
John West (Daresbury Laboratory, UK)

Beamline 10.3.2
Hoi-Ying Holman (Berkeley Lab)
Andreas Scheinost (Swiss Federal Institute of Technology Zurich, Switzerland)

7. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

The ALS is currently in a planned shutdown for installations and maintenance. User operations will resume at midnight on Wednesday, November 13, 2002, 32 hours earlier than scheduled.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 212 November 27, 2002

Contents of This Issue:

1. DYNAMIC JAHN-TELLER EFFECT IN BUCKYBALL CATIONS

by Art Robinson
(Contacts: berrah@wmich.edu, yencha@albany.edu)

High symmetry is not always the attribute preferred by nature when it comes to the geometry of atoms in molecules and solids, where structural distortions can in certain circumstances lower the overall energy and make for a more stable, if less symmetric, configuration. The latest example comes from the ALS, where a multinational team from the United States, Finland, and Brazil has uncovered the first experimental evidence for a dynamic Jahn-Teller effect in isolated cations of carbon-60 ("buckyballs"). With an origin in a strong coupling between electronic and vibrational states, the Jahn-Teller effect results in a lowering of the icosahedral symmetry of the neutral cluster. From the valence photoelectron spectrum, the group was able to unambiguously identify the relaxed geometry of the ionic ground state and determine that it was different from that believed to hold in matrix-isolated ions.

Read the full story at http://www-als.lbl.gov/als/science/sci_archive/58buckyball.html.

Publication about this research: S.E. Canton, A.J. Yencha, E. Kukk, J.D. Bozek, M.C.A. Lopes, G. Snell, and N. Berrah, "Experimental Evidence of a Dynamic Jahn-Teller Effect in C60+" Phys. Rev. Lett. 89, 045502 (2002).

2. DOE SECRETARY SPENCER ABRAHAM VISITS ALS

U.S. Secretary of Energy Spencer Abraham continued a tour of the Bay Area's three Department of Energy (DOE) laboratories yesterday with a visit to Berkeley Lab that included presentations at the ALS and an address to Berkeley Lab employees on the ALS patio. Berkeley Lab Director Charles Shank and ALS Director Daniel Chemla were on hand to escort Abraham, his wife, Jane, and a group including Ray Orbach (Director, DOE Office of Science) and Bruce Darling (University of California Vice President for University Affairs) around the ALS. Inside, Abraham listened appreciatively as Carolyn Larabell (Life Sciences Division) described recent advances in 3D tomography of single cells at Beamline 6.1.2 and as Daniel discussed molecular

environmental science studies (for example, of magnesium oxide nanoparticles) that will be possible at the brand-new Beamline 11.0.2 (see item 3 below). The Secretary of Energy then presided over an informal ceremony launching the beamline's commissioning phase. Outside on the patio, Abraham spoke to a Berkeley Lab all-hands gathering, praising the Lab's past achievements and expressing his belief that "the best days remain in the future." In addition to his stop at Berkeley Lab, Secretary Abraham is also scheduled to visit Lawrence Livermore National Laboratory and the Stanford Linear Accelerator Center.

3. FIRST LIGHT AT MOLECULAR ENVIRONMENTAL SCIENCE BEAMLINE

(Contacts: T_Warwick@lbl.gov, DKShuh@lbl.gov)

Beamline 11.0.2, equipped with an elliptically polarizing undulator (EPU) for molecular environmental science (MES) experiments, received synchrotron light for the first time on October 30, 2002. On that day, the undulator beam was brought to the endstation areas within two hours after the completion of readiness reviews. The first absorption spectra were obtained the following day, and the first soft x-ray microscopy images were obtained the day after that. Careful tune-up will proceed in the weeks to come, along with commissioning of the user endstations, with the synchrotron radiation beam serving a limited number of preliminary user experiments. The ALS-MES project is a collaboration with Berkeley Lab's Chemical Sciences Division, with the beamline designed by the ALS Experimental Systems Group and the 5-cm-period EPU designed by the ALS Engineering Group. David Shuh (Chemical Sciences Division), is the MES project leader.

Read more about the MES beamline at
http://www-als.lbl.gov/als/als_news/news_archive/vol.212_112702.html#3.

4. FOUR TO JOIN UEC AFTER THREE-WAY TIE IN VOTE

(Contact: AMGreiner@lbl.gov)

The ALS Users' Executive Committee (UEC) will welcome four new members next year, one more than had been anticipated. The top three vote-getters were to become the next UEC members, to replace the three members rotating off the committee at the end of 2002. When the votes were tabulated, however, three candidates ended up tied for "second place." All four will join the UEC next year. The incoming members are Gregory Denbeaux (Center for X-Ray Optics, Berkeley Lab), Dan Dessau (Dept. of Physics, University of Colorado), Keith Jackson (Center for X-Ray Optics, Berkeley Lab), and Gary E. Mitchell (Dow Chemical Company). More information about the new UEC members is available at http://www-als.lbl.gov/als/uec/vote/; for information about continuing members, see http://www-als.lbl.gov/als/uec/.

5. LAST CALL: GENERAL SCIENCES PROPOSALS DUE DECEMBER 1

(Contact: alsproposals@lbl.gov)

Sunday, December 1, 2002, is the deadline for general user proposals (formerly "independent investigator " proposals) in the general sciences for the running period from June to December

2003. (This deadline does not apply to protein crystallography proposals, which have a separate process and schedule; see the link for "Proposal process" below.) The User Services Office has sent email confirmations for all proposals received so far. If you submitted a proposal but have not received confirmation, please contact Jeff Troutman at alsproposals@lbl.gov.

Scientists wishing to renew a previous proposal must fill in a one-page Experiment Report/Beamtime Request (an RTF form is available for download at http://www-als.lbl.gov/als/quickguide/expt_report.rtf) and submit it to the User Services Office by the December 1 deadline. The numeric rating for each proposal will be communicated to the user along with any comments offered by the Proposal Study Panel. The cutoff rating for each beamline in the previous proposal cycle is published on the Web (see below). The following resources are available for further information:

Submitting a general science proposal for beam time
http://alsusweb.lbl.gov/

Becoming an ALS User
http://www-als.lbl.gov/als/quickguide/becomealsuser.html

Proposal process (general science and protein crystallography)
http://www-als.lbl.gov/als/quickguide/independinvest.html

Beamline information
http://www-als.lbl.gov/als/als_users_bl/datasheets.html
http://www-als.lbl.gov/als/als_users_bl/bl_table.html

Proposal Study Panel (PSP) scores
http://www-als.lbl.gov/als/quickguide/pspscores.html

ALS User Services Administrator
alsuser@lbl.gov

6. WANTED: PUBLICATIONS OF ALS-RELATED WORK, 2002
(Contact: alsuser@lbl.gov)

If you have recently published any ALS-related work in a scientific journal or conference proceedings, or completed a Ph.D. thesis on work done at the ALS, please let us know by going to the User Services Online Forms Web page at http://alsusweb.lbl.gov. Click on the "Publications Search & Submittal" link; this should remind you which of your publications are already in our database. Please DO NOT submit unpublished talks; abstracts; or journal articles that are still "submitted," "accepted," or "in press."

Your timely response will be greatly appreciated, as it is imperative that we accurately report the number of ALS-related publications to our funding agency. Publications are used as an important measure of the excellent science being done at our facility.

7. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3
Sasa Bajt, John Bradley (Lawrence Livermore National Laboratory)

Beamline 4.0.2
Stephen Cramer (Univ. of California, Davis)

Beamlines 5.0.1, 5.0.2, 5.0.3
Marc Jacobs (Vertex Pharmaceuticals)
Wenqing Xu, Weijun Huang, Ye Zhu, Yi Xing, James Sampietro (Univ. of Washington)
Gyorgy Snell (Syrrx, Inc.)

Beamline 7.0.1
Marjorie Olmstead (Univ. of Washington)
James Tobin (Lawrence Livermore National Laboratory)
Joseph Nordgren (Uppsala Univ., Sweden)

Beamline 7.3.1.1
Cynthia Morin, Adam Hitchcock (McMaster Univ., Canada)

Beamline 8.0.1
James Tobin (Lawrence Livermore National Laboratory)

Beamline 8.3.1
Irina Krylova, Peter Hwang, Julien Chen, Srikanth Dakoji (Univ. of California, San Francisco)
Ernst Bergmann, Bart Hazes, Pawel Grochulski, Gerald Audette (Univ. of Alberta, Canada)

Beamline 10.0.1
Ron Phaneuf (Univ. of Nevada, Reno)
Dan Dessau (Univ. of Colorado at Boulder)

Beamline 10.3.2
Alain Manceau (Univ. Joseph Fourier, France)

8. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of October 29 - November 3 and November 15 - 18, the beam reliability (time delivered/time scheduled) was 97%. Of the scheduled beam, 94% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift

should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========

ALSNews Vol. 213 December 11, 2002

Contents of This Issue:

1. EXPERIMENTAL PROGRESS TOWARD CSR SOURCE

(Contacts: MCMartin@lbl.gov, JMByrd@lbl.gov)

A high-power coherent synchrotron radiation (CSR) source in the THz range could enable a number of new scientific research directions, including the study of low-energy phenomena in condensed matter systems; direct nondestructive imaging techniques for medical, technological, and security applications; novel nonlinear regimes in materials; and ultrafast time-resolved studies of the dynamical properties of chemical reactions and correlated electron systems. The ALS is currently developing the scientific case and a plan for a storage-ring-based CSR source. Recent high-profile experiments have brought the goal of a CSR source several steps closer to reality.

To read the full story, go to
http://www-als.lbl.gov/als/als_news/news_archive/vol.213_121102.html#1.

2. LATEST SRI 2003 INFORMATION AVAILABLE ONLINE

(Contacts: HAPadmore@lbl.gov, stohr@ssrl.slac.stanford.edu)

A wealth of new information concerning the 2003 International Conference on Synchrotron Radiation Instrumentation (SRI 2003) is now posted at the official conference Web site (http://www.sri2003.lbl.gov/). One of the largest and most important synchrotron-related meetings in the world, SRI 2003 will be hosted jointly by the ALS and the Stanford Synchrotron Radiation Laboratory (SSRL) and is being chaired by Howard Padmore (ALS) and Jo Stohr (SSRL). The conference will be held August 25-29, 2003, at the Yerba Buena Center for the Arts in downtown San Francisco. The updated SRI 2003 Web site includes information about the venue, accommodations, abstract submission, and registration. A notice of the second announcement and direction to the Web site will be sent by email in the next few days to over 10,000 people who are currently on the mailing list. Organizers are planning to keep meeting transactions (such as announcements, abstract submission and review, and registration) as electronic as possible by using email and the Web. The conference proceedings will be published through the American Institute of Physics.

3. ALS AWARDS AND HONORS

The ALS is pleased to acknowledge those in its orbit who have been elected to Fellowship this year in the American Physical Society. ALS Users' Executive Committee member Dennis Lindle (University of Nevada, Las Vegas) was cited for "seminal contributions in atomic and molecular photoionization and the polarization of x-rays induced by photoionization of atoms and molecules." In particular, the nomination letter mentioned his "world class" research and leadership role at the ALS, "one of the finest UV/x-ray light sources in the world." Former ALS Accelerator Physics Group Leader Alan Jackson (Berkeley Lab) was recognized for "pioneering work in the development and construction of 3rd generation synchrotron radiation sources." Alan was the deputy director of the ALS construction project and guided the accelerators through construction, commissioning, and the generation of first light in 1993 and oversaw accelerator physics activities for six years thereafter. He is currently serving as Technical Director for the Australian Synchrotron Project. User Marjorie Ohlmstead (University of Washington) was recognized for "innovative studies of interface formation between dissimilar materials, especially the competition between thermodynamic and kinetic constraints in controlling morphologies and properties of heterostructures." Another user, Denis Cubaynes (Paris-Sud University), was cited for "his achievements in the field of atomic photoionization of laser-excited atoms and for having brought new insights into the creation and the properties of hollow atoms."

The APS Fellowship Program was created to recognize members who have made advances in knowledge through original research and publication or made significant and innovative contributions in the application of physics to science and technology. Each year, no more than one-half of one percent of the membership are recognized by their peers for election to the status of Fellow. This year a total of 192 new Fellows were elected. Congratulations to all on being recognized by the APS for your extraordinary contributions to science!

4. BERKELEY LAB TO CLOSE FOR HOLIDAYS

Berkeley Lab will close on the evening of December 23 and reopen on the morning of January 2. During the closure, the Lab will shut down as much heating and ventilating equipment as possible to reduce costs. However, power to the ALS building will be maintained, and the last user run of 2002 extends to 10:30 p.m. on December 23. Anyone having to work on site during this time will need a current ID badge and parking permit to gain access. The User Services Office will provide badging only until 4 p.m. on December 23. Unbadged visitors must have been verified and cleared through the gate by an appropriate host prior to entry. The first user run of 2003 will be January 4 - 6. The next issue of ALSNews will be published on January 22. We wish you all a pleasant and relaxing holiday season!

5. WHO'S IN TOWN: A SAMPLING OF ALS USERS

Following are some of the experimenters who will be collecting data during the next two weeks at the ALS.

Beamline 1.4.3

Hoi-Ying Holman (Berkeley Lab)
Dan Fried (Univ. of California, San Francisco)
Ted Raab (Carnegie Institution of Washington)

Beamline 4.0.2
Jo Stohr (Stanford Synchrotron Radiation Laboratory)
Chuck Fadley (Univ. of California, Davis, and Berkeley Lab)

Beamlines 5.0.1, 5.0.2, 5.0.3
Shengfeng Chen, Jinyu Liu, Dong Hae Shin (Berkeley Structural Genomics Center)
Dan Knighton, Marc Deller, Samantha Greasley, Hans Parge (Agouron/Pfizer-La Jolla)
Russell Doolittle, Justin Kollman (Univ. of California, San Diego)
Marc Knapp (Roche Bioscience)
Steve Damo, Seok-Yong Lee (Berkeley Lab)
Will Somers, Kevin Parris (Wyeth-Ayerst Research)
Gyorgy Snell (Syrrx, Inc.)

Beamline 7.0.1
James Allen (Univ. of Michigan)
Stuart Parkin (IBM Almaden Research Center)
Jim Tobin (Lawrence Livermore National Laboratory)
Steve Kevan (Univ. of Oregon)

Beamline 7.3.1.1
Z.Q. Qiu (Univ. of California, Berkeley)
Gary Mitchell (The Dow Chemical Company)
Stephen Urquhart (Univ. of Saskatchewan, Canada)

Beamline 8.0.1
David Shuh (Berkeley Lab)

Beamline 8.2.1
Jay Nix, Sergei Trakhanov, Martin Laurberg (Univ. of California, Santa Cruz)

Beamline 8.2.2
Doug Davies, George Wisedchaisri, Jan Abendroth (Univ. of Washington)
Joseph Mougous (Univ. of California, Berkeley)

Beamline 8.3.1
Partho Ghosh, Lori Buetow, Jonathan Mikolosko (Univ. of California, San Diego)

Beamline 10.0.1
Nora Berrah (Western Michigan Univ.)
Xingjiang Zhou (Berkeley Lab)

Beamline 10.3.2
Alain Manceau (Univ. Joseph Fourier, France)
Andrei Istratov (Berkeley Lab)

6. OPERATIONS UPDATE
(Contact: Lampo@lbl.gov)

For the user runs of November 20 - 26 and December 3 - 8, the beam reliability (time delivered/time scheduled) was 96%. Of the scheduled beam, 88% was delivered to completion without interruption. There were no significant outages.

Long-term and weekly operations schedules are available on the Web (http://www-als.lbl.gov/als/schedules/index.html). Requests for special operations use of the "scrubbing" shift should be sent to Bruce Samuelson (BCSamuelson@lbl.gov, x4738) by 1:00 p.m. Friday. The Accelerator Status Hotline at (510) 486-6766 (ext. 6766 from Lab phones) features a recorded message giving up-to-date information on the operational status of the accelerator.

==========

ALSNews is a biweekly electronic newsletter to keep users informed about developments at the Advanced Light Source, a national user facility located at Ernest Orlando Lawrence Berkeley National Laboratory, University of California. The current and past issues of ALSNews are available on the World Wide Web. Point your browser to the following URL:

http://www-als.lbl.gov/als/als_news/

To subscribe, unsubscribe, or change your delivery address for the email version of ALSNews, send a message indicating your wishes and including your name and email address to alsnews@lbl.gov. We welcome suggestions for topics and content. Submissions are due the Friday before the issue date.

LBNL/PUB-863
Editors: lstamura@lbl.gov, alrobinson@lbl.gov, amgreiner@lbl.gov

This work was supported by the Director, Office of Science, Office of Basic Energy Sciences, of the U.S. Department of Energy under Contract No. DE-AC03-76SF00098.

==========